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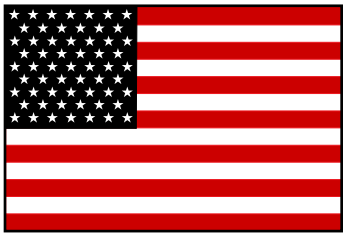
AVIATION MAINTENANCE ALERTS



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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provide a common communication channel through which the aviation community can economically interchange service experience and thereby cooperate in the improvement of aeronautical product durability, reliability, and safety. This publication is prepared from information submitted by those who operate and maintain civil aeronautical products. The contents include items that have been reported as significant, but which have not been evaluated fully by the time the material went to press. As additional facts such as cause and corrective action are identified, the data will be published in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported via Malfunction or Defect Reports. Your comments and suggestions for improvement are always welcome. Send to: FAA; ATTN: Designee Standardization Branch (AFS-640); P.O. Box 25082; Oklahoma City, OK 73125-5029.

AIRPLANES

AERONCA

Aeronca; Model 7AC; Champ; Defective Wheel; ATA 3246

While complying with the requirements of Airworthiness Directive (AD) 48-08-02, the technician discovered a defective wheel assembly.

The technician found a crack in the wheel bead radius of the inner wheel half. The crack extended around approximately 90 percent of the wheel diameter.

The submitter stressed the importance of disassembling the wheel assembly to properly conduct the inspection required by the AD. An "external" inspection may not reveal defects and cracks, and the AD requires removal of the tires for inspection. The AD is applicable to several aircraft equipped with Cleveland Model 6:00 DMB wheels. Consult the AD for specific applicability.

Part total time not reported.

BEECH

Beech; Model C-24R; Musketeer; In-Flight Engine Power Degradation; ATA 7160

During an instructional flight, the engine performance deteriorated and the pilot made an immediate landing.

A technician conducted an operational test and discovered the engine did not develop full power. After the test, he removed the air filter element and discovered the alternate air door (P/N 169-910077-21) broke loose from its hinge. The alternate air door plate lodged in the fuel servo intake and obstructed airflow to the induction system.

(Refer to the following illustration.) This aircraft had undergone a scheduled inspection 81 operating hours prior to this occurrence and the technician did not record any defects.

The submitter recommended the manufacturer consider redesigning the alternate air door to make it more structurally substantial and/or provide a means of preventing the door from obstructing the induction system airflow.

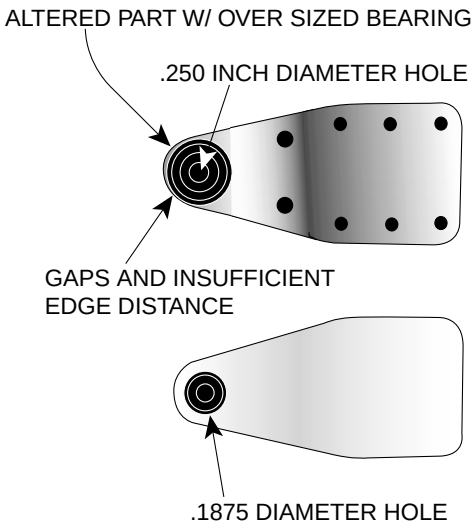
Part total time-3,008 hours.

Beech; Model BE58; Baron; Improper Elevator Hinge Repair; ATA 5520

While performing other maintenance, a technician discovered an improper elevator hinge repair.

The left outboard elevator hinge point bearing did not appear correct and prompted the technician to investigate further. He discovered the wrong bearing (P/N MKSP4A) installed instead of the correct part (P/N KSP3L). The incorrect bearing has a larger outside diameter, and the center pivot fastener hole is .250 inch as opposed to an .1875-inch center hole of the correct bearing. (Refer to the following illustration.) In order to return the aircraft to an airworthy condition, he replaced the entire hinge assembly.

The previous installer ground out the hinge bracket (P/N 96-610024-601) to accommodate the larger diameter bearing. The hinge displayed gouges and scars apparently made when the installer hammered the hinge into position. The removal of hinge bracket material left very little edge distance for retaining the bearing. The .1875-inch center pivot bolt had additional spacers installed and was over torqued in an effort to compensate for the .250-inch hole. The overall workmanship of this repair was very poor. This aircraft was recently painted, and the submitter speculated a noncertificated person accomplished the improper repair.



In-flight failure of this hinge assembly could cause elevator flutter and possibly elevator separation. In this case, the technician's sharp eye may have prevented a serious aircraft accident. He cautioned maintenance personnel to inspect the entire aircraft very closely after painting, especially the flight control systems.

The total time for the improper part was unknown.

Beech; Model 58; Baron; Landing Gear Defect; ATA 3230

During a scheduled inspection, a technician found the left main landing gear downlock cable damaged.

The cable (P/N 106-810011-1) had frayed through approximately half of its diameter. The damage originated adjacent to the swaged cable terminal used to attach the cable to the landing gear actuator. The submitter did not find any evidence of the cable bending or flexing. He speculated the damage may have occurred when the cable was manufactured.

Part total time-601 hours.

Beech; Model 58P; Baron; Engine Control Restriction; ATA 7602

After a flight, the pilot stated he was unable to obtain the “full-rich” position with the left engine mixture control.

During an investigation, the technician discovered the dry air pump pressure line obstructed the mixture control linkage travel. When he repositioned the pressure line, the mixture control functioned properly. The submitter recommended that all personnel check for adequate clearance between these components during scheduled inspections.

Part total time not reported.

Beech; Model 58P; Baron; Air-Conditioning System Missing Hardware; ATA 2110

During a visual inspection of the left engine, the technician discovered a nut missing from the freon compressor bracket assembly.

The missing nut (P/N MS20364-624C) secures the idler sheave arm retaining bolt. The sheave assembly was held on the compressor bracket by belt tension and was in imminent danger of failure. After removing the bolt, the technician determined it was serviceable and re-installed it with a new nut and washer. He speculated the nut was subjected to multiple installations and vibrated off the bolt due to failure of the locking device.

The submitter cautioned all technicians to discard self-locking nuts each time they are removed.

Part total time not reported.

Beech; Model B60; Duke; Horizontal Stabilizer Security; ATA 5510

During an annual inspection, the technician discovered the horizontal stabilizer made a “creaking” sound when he applied hand pressure at the tip.

Investigating further, the technician noticed movement at the aft attachment fitting on both sides of the horizontal stabilizer. He removed the bolts (P/N AN176-7A), which were not tight, from the close-tolerance holes in the fitting and discovered they were too short for this installation. The manufacturer's technical data, as well as the

measured hole depth, indicates these bolts should have been four sizes longer (P/N AN176-11A). It appeared these bolts were installed as original equipment when the aircraft was manufactured.

Since this condition presents a potentially serious safety problem, the submitter suggested all operators of like aircraft check for proper horizontal stabilizer attachment hardware at the next opportunity.

Part total time-1,629 hours.

Beech; Model C90A; King Air; Wheel Assembly Defect; ATA 3246

When the aircraft landed and taxied to the parking ramp, the technician noticed the left main gear wheel wobbling.

The technician jacked the aircraft to remove the left main wheel. The wheel assembly (P/N 50-300010-133) slid off the axle before he removed the axle nut. The outer bearing was frozen and disintegrated, and the inner bearing outer race spun in the wheel. He stated “all of the wheel-half bolts were finger loose.” This situation makes an excellent case for attention to detail and a good preflight inspection.

Part total time not reported.

Beech; Model BE99; Airliner; Engine Mount Tube Wear; ATA 7120

During a double engine change, maintenance personnel discovered both of the tube frame mount torsion bars worn beyond limits.

The submitter stated excessive wear (chafing) occurred when the aft lower stainless steel fire shield rested on the engine mount (P/N 50-910279) tube. The defect location is concealed by the rubber section of the fire shield and makes inspecting this area difficult.

Normally, there is adequate clearance between the fire shield and the torsion tube; however, if the fire shield is bent forward, as may happen during an engine installation, these parts may chafe.

Part total time-33,953 hours.

Beech; Model B200; King Air; Defective Landing Gear Rigging; ATA 3230

While conducting a training flight, the crew simulated an engine out with the landing gear extended. During this scenario, the landing gear was retracted, and the crew noticed the hydraulic pump operated an unusually long period of time.

After a safe landing, a technician inspected the aircraft and found the left main gear inboard door edge bent and distorted. Further investigation revealed the landing gear door was not properly rigged. He speculated the “yaw” condition imposed on the aircraft during flight and the overcenter condition of the gear door rigging allowed

contact between the wheel assembly and the door edge when the gear was retracted. He speculated that during a previous inspection, a technician rigged the landing gear doors improperly.

Part total time-5,434 hours.

Beech; Model 300; King Air; Cabin Pressurization System Malfunction; ATA 2133

The pilot reported that while climbing through 20,000 feet the cabin pressurization system became erratic and there was no rate control. The pilot terminated the flight and made a safe landing.

A maintenance technician inspected the system and found the outflow valve (P/N 103648-7) failed internally. After removing and disassembling the outflow valve, he found the diaphragm retaining ring (P/N 146067-2) cracked. The safety valve failed in the same manner. The outflow valve and the safety valve are date stamped January 1985, indicating their manufacture date. The submitter believes they were installed as original equipment.

Part total time-4,005 hours.

CESSNA

Cessna; Model 172R; Skyhawk; Rudder Pedal Defect; ATA 2720

During a scheduled inspection, the technician discovered the copilot's left rudder pedal was excessively loose.

The cause of the rudder pedal looseness was at the dual brake tube where the bearing (P/N S1003-43A) was missing. It was apparent the bearing was not installed when the aircraft was manufactured. The submitter stated this is the second time he has found this type of defect.

Part total time-1,398 hours.

Cessna; Model 172S; Skyhawk; Defective Fuel Quantity System; ATA 2840

The pilot reported that during flight, the left fuel quantity indicator went to empty, and the left "low fuel" annunciator light illuminated.

While investigating this incident, a technician determined the fuel quantity transmitter was inoperative. When the technician removed the transmitter, he discovered the float and the retainer washer missing from the float arm. He stated the transmitter was incorrectly manufactured. The wire arm running through the float was not crimped on either side of the float. After opening the fuel tank and retrieving the float and retainer washer, he discovered the left and right fuel quantity transmitters were switched during installation. The left transmitter (P/N S3331-1) was in the right tank, and the right transmitter (P/N S3331-2) was in the left tank. He replaced both fuel quantity transmitters, and the system functioned properly during a test.

Aircraft total time-768 hours.

Cessna; Model 182F; Skylane; Empennage Structural Defect; ATA 5500

In the process of an annual inspection, a technician found a crack in an empennage bulkhead.

The bulkhead (P/N 0712616-1) was cracked at a cutout for the left rudder cable. The technician also found a crack at the hole for the tail tiedown loop. He speculated this damage was caused by a “tail strike” during landing, improper ground movement of the aircraft, or possibly wind damage.

Part total time-4,039 hours.

Cessna; Model A-185F; Skywagon; Wing Flap Failure; ATA 2750

During a landing approach, the pilot experienced a sudden, uncommanded retraction of the wing flaps. He completed a safe landing and summoned maintenance personnel.

While inspecting the aircraft, a technician found a wing flap control cable (P/N 0510105-122) broken. The cable separated approximately .025 inch from a swaged terminal (eye) end fitting (P/N MS20668-3).

The submitter stated the system design may cause bending of the cable adjacent to the rigid end fitting and contribute to fatigue stress failures. The location of this failure made proper inspection virtually impossible. He recommended that technicians conduct thorough and frequent inspections even if it requires cable removal.

Part total time-2,500 hours.

Cessna; Model 205; Fuel Injection Pump Leak; ATA 7314

While securing the aircraft, the pilot noticed fuel dripping from the left cowl flap opening.

After further inspection, the pilot discovered the fuel came from an engine drain line attached to the fuel injection pump. He placed the fuel selector valve in the “off” position, and the leak stopped. This indicated the fuel leaked only under pressure. Also, during an engine operational test, the injection pump drain did not leak, and the engine operated properly. The FAA Service Difficulty Reporting (SDR) Program data base contains nine additional reported pump failures. These failures involved fuel pumps installed on Cessna 185, 210, and 310-series aircraft; Beech 33-series aircraft; and a Gulfstream 500A-series aircraft. Several of the reports listed serious degradation of engine operation as a result of the pump failures.

The submitter did not give a cause for this defect; however, he suggested that operators be observant for injection pump fuel leakage after engine shutdown.

Part total time-46 hours.

Cessna; Model P206C; Super Skylane; Engine Control Failure; ATA 7603

As the pilot reduced engine power to begin a descent, the throttle control broke, and the engine went to idle RPM. He made a safe, off-airport landing.

A maintenance technician discovered the throttle cable (P/N S1222-18) broke above the cable support bracket. He speculated the throttle cable failed because improper hardware was used to install the support bracket. The improper hardware caused the support bracket to flex when the throttle and mixture controls were activated which subjected the cables to metal fatigue and stress.

The submitter suggested giving attention to detail when installing these controls and inspecting them closely at every opportunity.

Part total time-126 hours.

Cessna; Models 401 and 402; Fuel Transfer Pump Failures; ATA 2822

A technician submitted four reports concerning tiptank fuel transfer pump failure.

According to these reports, the transfer pumps (P/N 476411) fail with less than 300 operating hours. In addition to these four reports, the FAA Service Difficulty Reporting (SDR) Program data base contains another 15 reported failures. The additional failure reports concern the same transfer pumps installed on Cessna 310, 340, and 421-series aircraft. This fuel pump may also be used on other makes and models of aircraft. One of the pumps failed after only 16 hours of operation and the highest operating hours before failure was 368.

In-flight failure of the transfer pump may create a hazard to flight safety. The submitter recommended that the manufacturer investigate and correct this problem.

Part total times as indicated above.

Cessna; Model 402C; Businessliner; Tire Failure; ATA 3244

While taxiing to the runway, the flightcrew noticed an unusual noise and returned the aircraft to the parking ramp.

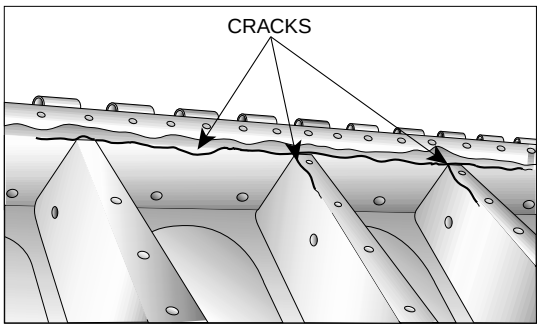
A maintenance technician discovered a section of the left main gear tire tread missing. A large piece of the recap separated from the tire casing. He did not identify the tire brand; however, he implied the recap process was faulty. He did not list the number of takeoffs and landings since the recapped tire was installed. A thorough preflight inspection should have detected this defect before the aircraft was accepted for flight.

Part total time-99 hours.

Cessna; Model 425; Conquest; Elevator Trim Tab Structural Defect; ATA 5513

While conducting a scheduled inspection, the inspector noticed a slight buckling in the area of the elevator trim tab hinge.

After removing the elevator upper skin adjacent to the trim tab hinge, the technician discovered a severe structural crack which jeopardized the trim tab security. The crack was located on the elevator hinge bracket (P/N 5834120-6) and traveled approximately 12.25 inches between two elevator ribs (P/N's 5834110-90 and 5834110-98). He also found smaller cracks in the upper radii at the aft end of the elevator ribs. (Refer to the following illustration.) He obtained a repair scheme from an FAA Designated Engineering Representative (DER).



Since only a slight ripple in the hinge area evidenced this defect, it could easily be overlooked. The submitter suggested investigating any anomaly in this area.

Part total time not reported.

Cessna; Model 750; Citation; Defective Galley Station Equipment; ATA 2530

During flight, a crewmember turned on the cabin galley coffeemaker. Shortly thereafter, smoke was evident in the galley area. The crewmember removed electrical power from the galley systems, and the smoke subsided.

After completion of the flight, a technician removed the galley switch panel (Pacific Systems P/N 1322-1-55) and found the plastic coupler (P/N 1040-1-2) significantly melted, burned, and distorted. There was only minimal damage to the surrounding equipment and the airframe.

The equipment manufacturer is presently conducting an investigation to determine the cause of this defect. If further information is obtained, it will be printed in a future edition of this publication.

Part total time-2,870 hours.

FAIRCHILD

Fairchild; Model SA-226AT; Merlin IV; Brake Assembly Defect; ATA 3240

The flightcrew reported that during a landing, the left main gear brake "locked up" and caused the aircraft to depart the runway.

Both of the left main tires suffered severe damage from skidding. A technician determined water entered the left brake assembly (BF Goodrich P/N 2-1203-3), froze when the aircraft climbed to altitude, and did not thaw prior to landing. The brake assembly froze which disabled the antiskid system.

The submitter did not suggest a reason for the water entering and being retained inside the brake assembly.

Part total time not reported.

GRUMMAN AMERICAN

Grumman American; Model AA-5B; Seatbelt Airworthiness Directives; ATA 2510

In the past 6 months, this submitter found two similar aircraft which had unairworthy seatbelts installed.

These seatbelts, manufactured by Indiana Mills and Manufacturing, Inc., are subject to the requirements of Airworthiness Directive (AD) 79-16-02. This AD became effective August 2, 1979, and requires removal of the seatbelts within 120 days of the effective date. The submitter stated he still finds these seatbelts installed which indicates that inspectors and technicians are missing this AD because they do not check the "Appliance" section of the AD list.

This defect may be prevalent in many other aircraft in which these seatbelts were installed. All those involved in compliance with scheduled inspections are strongly encouraged to ensure compliance with all AD's applicable to each aircraft they are involved with.

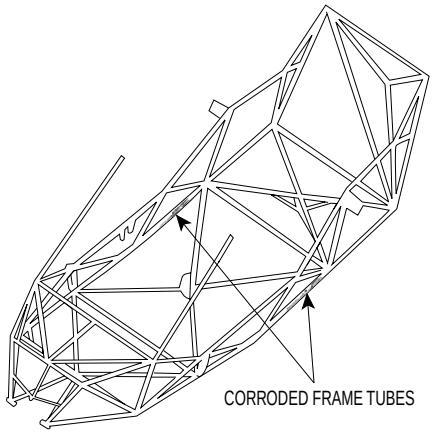
Part total time-812 hours.

PIPER

Piper; Model PA 23-250; Aztec; Fuselage Structural Corrosion; ATA 5311

During a scheduled inspection, the inspector found severe fuselage structural corrosion.

The technician replaced the left and right lower fuselage mainframe tubes (P/N 17134-44) due to the corrosion damage. (Refer to the following illustration.) He stated this damage was caused by water soaked insulation material being held in contact with the structural tubes. Also, he suspected the water came from poorly fitting door and window installations. These tubes are constructed of 1-inch diameter 4130 steel tube stock with a .049-inch wall thickness and are 62 inches long.



The submitter suggested giving special attention to this area during scheduled inspections. He also suggested making sure all windows and doors are sealed and fit properly.

Part total time not reported.

Piper; Model PA 28-140; Cherokee; Defective Rudder Control Attachment; ATA 2720

During an annual inspection, the technician discovered the rudder pedal crossbar displayed excessive movement.

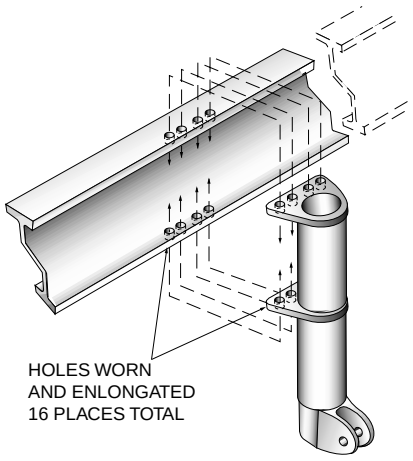
Further inspection revealed the crossbar support bracket (P/N 63451-00) attachment holes (four) were cracked and broken. It appeared to the submitter metal fatigue caused this defect. He questioned the structural integrity of the .035 inch steel used to construct this assembly. He recommended the manufacturer consider improving this structure by adding gussets and/or using thicker material to construct the rudder crossbar support bracket.

Part total time-5,960 hours.

Piper; Model PA 28-151; Warrior; Main Landing Gear Attachment Defect; ATA 3211

On several occasions during scheduled inspections, the technician found the left main landing gear attachment defective.

The technician usually found one of the spar cap attachment bolts broken. The fastener holes in both the upper and lower spar caps and the landing gear strut (P/N 65319-004) were elongated. (Refer to the following illustration.) The manufacturer does not provide a repair scheme for this damage, and it was necessary to obtain repair procedures from a Designated Engineering Representative (DER).



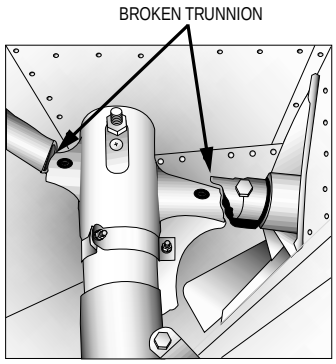
The life of this aircraft was dedicated to flight training, and the submitter stated it was common to make a tight left turn of 180 degrees while approaching the assigned parking place. He speculated this might induce excessive stress on the left main gear attachment and result in strut attachment damage.

Part total time-11,100 hours.

Piper; Model PA 30; Twin Comanche; Main Landing Gear Structural Failure; ATA 3211

During a landing approach, the pilot could not extend the right main landing gear. All attempts to extend the gear failed, and the pilot landed the aircraft with the gear in the “up” position.

While recovering the aircraft from the runway, a maintenance technician had to pry the right main gear out of the wheel well. When the gear was extended, he discovered the aft supporting portion of the gear trunnion (P/N 20752-09) housing broken. (Refer to the following illustration.) When the housing broke, the wheel assembly shifted and jammed in the wheel well. The submitter did not give a cause for this defect, but suggested a close check of this area during scheduled inspections.



Part total time not reported.

Piper; Model PA 30; Twin Comanche; Fuel Contamination; ATA 2810

The aircraft owner/pilot reported finding water in the fuel samples taken from the sumps.

While searching for the source of the fuel contamination, the technician discovered water dripping from the fuel caps (P/N 27221-00). He disassembled the fuel caps and found a significant amount of moisture inside each cap. He stated the fuel caps are the older “thermos-bottle” type. Their design allows water intrusion through the locking lever shaft if the bottom metal portion of the cap is distorted or the attaching hardware is corroded. This condition is further aggravated when the fuel filler scupper drains are plugged.

The submitter suggested checking these fuel filler caps closely for corrosion and condition during scheduled inspections.

Part total time-4,800 hours.

Piper; Model PA 31-350; Chieftain; Hydraulic System Defect; ATA 2922

The pilot reported the landing gear would not extend normally, and he had to use the emergency gear extension system.

As the pilot taxied the aircraft into a parking space, the technician noticed hydraulic fluid leaking from the left engine compartment. While searching for the hydraulic leak source, he found the fluid coming from the area of the hydraulic filter in the left engine

compartment. After removing the filter, he discovered a crack in the filter housing (P/N 460-635) threads. The housing threads, used to attach the filter, were cracked completely through and allowed hydraulic fluid to escape.

The submitter speculated the threads may have been damaged by excessive torque on the hydraulic filter at some time in the past.

Part total time not reported.

Piper; Model PA 34-220T; Seneca; Engine Exhaust System Defect; ATA 7810

After a flight, the pilot stated he experienced “split throttles” and was unable to obtain full power on the left engine.

The technician inspected the left engine and discovered the exhaust system “Y-duct” assembly (P/N 654237) cracked adjacent to the turbocharger. The “Y-duct” assembly was installed recently as a component of a factory-remanufactured engine. At the time of this report, the cause of this defect has not been determined. If further information is provided, it will be included in a future edition of this publication.

Part total time-78 hours.

Piper; Model PA 44-180; Seminole; Fuel Leak; ATA 2810

During a preflight inspection, the pilot noticed a fuel leak and summoned maintenance personnel.

A technician found fuel dripping from the right wing nacelle aft of the engine. Investigating further, he discovered a crack in a nacelle fuel tank outlet nipple caused the leak. The bladder tank (P/N 461-698) outlet nipple cracked where it exited the fuel tank, causing the hole. The submitter stated the fuel line, attaching to the nipple, was not adequately supported and allowed engine vibrations to work harden the nipple until it cracked. He suggested operators of like aircraft check the support and security of the fuel outlet line and the outlet nipple for cracks.

Part total time-610 hours.

Piper; Model PA 42-1000; Cheyenne; Defective Main Landing Gear; ATA 3230

During a landing sequence, the pilot could not attain a “down-and-locked” indication for the right main gear. The landing gear appeared to be down; however, it slowly collapsed after landing.

While investigating the cause of this incident, a technician found a broken right main gear actuator rod-end (P/N 758-440). This failure effectively disabled both the normal and emergency landing gear extension systems. The rod-end broke into two pieces, allowing the bearing to separate.

The submitter speculated machining marks on the bearing housing might have caused the rod-end failure.

Part total time-4,083 hours.

Piper; Model PA 46-350P; Malibu Mirage; Nose Landing Gear Failure; ATA 3251

The pilot reported that during landing, the nose gear steering did not function and the gear collapsed when the aircraft departed the runway.

While investigating this incident, an FAA inspector discovered the nose gear strut was broken at the engine mount hard points, and the nose gear steering arm (P/N 83625-07) was broken.

The inspector determined nose steering failure caused the aircraft to leave the runway at a speed sufficient to break the engine mount hard points. He could not determine a cause of the nose steering arm failure.

Part total time not reported.

HELICOPTERS

BELL

Bell; Models 205A-1, 205B, 212, 412, 412EP, and 412CF; Tail Rotor Bellcrank Security; ATA 6400

The following article was submitted by the FAA, Rotorcraft Certification Office, ASW-170.

> As a result of a recent accident investigation, Bell Helicopter Textron issued Alert Service Bulletins (ASB) 205-00-77, 205B-00-31, 212-00-107, 412-00-102, and 412CF-00-10 all dated May 26, 2000.
>
> The accident involved the in-flight loss of a tail rotor counterweight bellcrank (P/N 212-011-705-001). The investigator found the bellcrank retention nut (P/N MS14145L6) failed allowing the bellcrank to migrate off the crosshead spindle. This caused severe vibration and extensive damage to the tail rotor blades. Further investigation led the inspector to discover the retention nuts are susceptible to an overtorque condition and corrosion cracking if not installed correctly and adequately protected from the environment.
>
> The previously listed ASB's were issued to advise operators that the nuts (P/N's MS14145L6 and MS17826-6) are for "one-time use" only and should be discarded when removed. Also, the installation procedures and corrosion protection for the nuts has been changed.

Part total time not applicable.

Bell; Models 214B and 214B-1; Main Rotor Fitting Life Limit; ATA 6210

The following article was submitted by the FAA, Rotorcraft Certification Office, ASW-170.

Bell Helicopter Textron issued Alert Service Bulletin (ASB) 214-00-62, dated June 2, 2000. This ASB establishes a 2,500-hour component retirement life for the main rotor outboard strap fitting assembly (P/N 214-010-185-107).

Currently, this part is not listed in the Airworthiness Limitations section (chapter 4) of the maintenance manual. Fatigue testing by Bell determined the need for creating a life limit for the strap fitting assembly.

Bell; Models 412 and 412EP; Collective Lever Security; ATA 6710

Bell Helicopter Textron has issued Alert Service Bulletins (ASB) 412-00-101 and 412CF-00-9, dated March 28, 2000, which deal with improper hardware used to secure the collective control lever pin. These ASB's are applicable to the following listed helicopters: Models 412 and 412EP Serial Nos. 3300l through 33213, 36001 through 36207, and 34001 through 34036; 412CF Serial Nos. 46400 through 46499.

Two recent incidents indicated disengagement of the collective lever pin from the collective sleeve. In both cases, the collective lever pin was completely disengaged from the collective sleeve and the collective lever. While investigating these incidents, the investigator determined that the wrong type of bolt and the wrong length of bolt were used to retain the pin to the collective lever. The short bolts did not provide sufficient thread engagement in the collective lever and eventually fretted to the point where they no longer retained the pin. The retention bolts are identified as NAS6604H5, 20-057-4-3H, or NAS6604H4 for the collective lever pins 412-010-422-101 or –103.

The ASB's referred to above, impose a one-time inspection to verify the part number of the collective lever pin retaining bolts and provide further instructions for inspection if an incorrect bolt is installed.

ROBINSON

Robinson; Model R-22; Mariner; Carburetor Security; ATA 7322

After starting the engine, the pilot found that performance was very poor, and the engine would hardly run.

While investigating, a technician discovered that three of the four carburetor (Precision Airmotive Model MA-4SPA) bowl attachment fasteners were missing and the fourth was loose. There was a .375-inch gap between the carburetor body and the bowl; therefore, excessive air was drawn into the induction system. The three fastener locking tabs were missing, and the remaining locking tab was damaged.

The submitter stated the carburetor bowl was in imminent danger of complete separation. All operators and maintenance personnel should be aware that defective fastener locking tabs may contribute to the loss of carburetor bowl security.

Part total time-328 hours.

AGRICULTURAL AIRCRAFT

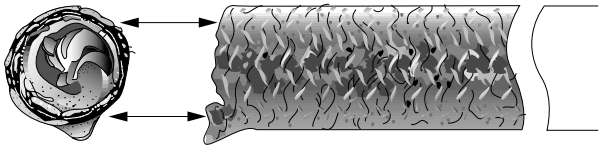
AYRES

Ayres; Model S-2R; Thrush; Defective Fuel Hose; ATA 2820

During engine ground operation, the operator found the engine performance poor and would not develop full power.

While investigating, a technician discovered fuel flow to the fuel pump severely restricted. He found the flexible hose (Stratoflex P/N 111-8) internal lining which connects the fuel shutoff valve to the fuel pump collapsed. Also, the collapsed hose inner lining was swollen which further reduced fuel flow. (Refer to the following illustration.)

No matter the application, all aviation plumbing must be compatible with the product it transports. Owners, operators, and maintenance personnel are strongly urged to inspect all flexible aircraft plumbing at frequent intervals, and replace it before problems are caused.



Part total time not reported.

AMATEUR, EXPERIMENTAL, AND SPORT AIRCRAFT

AVIAT

Aviat; Model A-1; Flight Control Linkage Chafing; ATA 2731

During a scheduled inspection, the aircraft owner discovered the elevator trim tab linkage chafing.

The clevis bolt attached to the elevator trim horn link (P/N 3-5274-001), chafed against the empennage structural tubing when the trim system moved. The link was not joggled as recommended by the kit manufacturer. A joggle in the link allows the trim cable to deflect inboard which provides adequate structure clearance.

The submitter encouraged builders to consult the kit manufacturer if deviations to the construction instructions are required.

Part total time-390 hours.

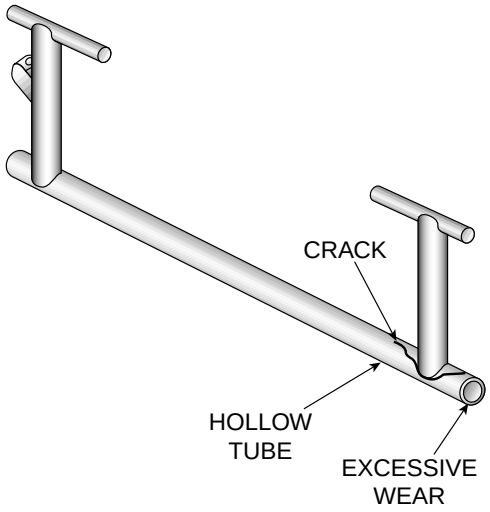
SKYSTAR

Skystar (Kitfox); Models 1 through 4 and Classic 4; Rudder Pedal Torque Tube Metal Fatigue; ATA 2720

While investigating a recent aircraft incident, FAA inspector David Miller, of the Houston, Texas Flight Standards District Office, found the right rudder pedal broken.

The failure resulted from pre-existing cracks where the torque tube and rudder pedal attach. The inspector found excessive wear on the torque tube where the "Nylon" bearing rotates. (Refer to the following illustration.) After inspecting the rudder pedal torque tube, Skystar determined the excessive wear resulted from an installation error. Part of the torque tube structure was removed, presumably to make the bearing installation easier.

This case represents a classic failure, which has been well documented. The aircraft kit manufacturer, Skystar, has been diligent in their attempts to remedy this problem. They issued Service Letter (SL) number 47, dated August 22, 1995, dealing with this subject. The SL 47 offers a reinforcement kit (P/N 35015.000) that improves the structural integrity of the rudder pedal torque tube interface. At the same time the manufacturer issued the SL 47, they initiated a product improvement to eliminate rudder pedal/torque tube metal fatigue problems. Therefore, aircraft kits manufactured since September 1995, should not be subject to metal fatigue problems at this location.



This article is intended to notify operators of affected aircraft models manufactured prior to September 1995, that a hazardous flight safety condition may exist if the aircraft is not in compliance with the inspection requirements, kit, and instructions referenced in the SL 47. Skystar stated an estimated 2,000 Models 1 through 4 aircraft rudder pedal installations may be affected, and 10 cases involving rudder pedal cracks have been reported. In some of these cases, failures occurred at a relatively low number of operating hours.

Part total time-194 hours.

STAUDACHER

Staudacher; Model S300; Flight Control Failure; ATA 2710

While performing aerobatic maneuvers, the pilot executed a one-half snaproll to the left, and the left aileron separated from the aircraft. The pilot was able to land the aircraft and was not seriously injured; however, the aircraft was destroyed.

FAA inspector Tim Anderson, of the Milwaukee, Wisconsin Flight Standards District Office investigated this accident. He found the left aileron center hinge failed due to metal fatigue which caused the aileron failure and separation. The aileron hinge design uses three rod-end bearings attached to an aluminum block which is attached to the wing spar. The threaded stud of the rod-ends use a jamnut for adjustment. The failure occurred between the jamnut and the aluminum mounting block. A metallurgical examination of the broken rod-end revealed the threaded stud was not heat treated. It failed due to bending which led to metal separation.

The manufacturer recommends the use of heat-treated rod-end bearings (P/N REP3M6-2N) at the aileron hinge points. We urge all aircraft builders to consult the kit manufacturer before substituting or changing any parts recommended or supplied with a kit.

The FAA Service Difficulty Reporting Program data base contains three additional accidents involving this make of aircraft. One of the accidents was caused by separation of the right aileron under different circumstances.

Part total time-393 hours.

VAN'S

Van's; Model RV-3; Improper Propeller Hardware; ATA 6110

FAA inspector Michael Brown, of the Scottsdale, Arizona Flight Standards District Office furnished the information for this article.

During flight, the pilot noticed an unusual vibration and noise. He reduced engine power and landed the aircraft.

While inspecting the aircraft, the pilot discovered five of the six bolts (P/N AN6-60) used to secure the propeller to the engine crankshaft flange were broken. The broken bolts remained in place and two washers were installed under each nut. The wooden propeller assembly (Pacesetter) incorporates a "crush plate" and spinner bulkhead attached to the crankshaft flange extension. The "crush plate" is designed with a groove intended to prevent the propeller bolts from turning.

Inspector Brown speculated that since the original propeller installation, the wooden structure "shrunk" and the bolts became loose. The bolts were evidently retorqued after the shrinkage occurred. Each of the bolts had four to five treads extending past the end of the nut, and the nut bottomed out on the bolt shank. With the bolt head held by the

"crush plate" groove, the person checking the bolt torque may have thought the bolts were properly torqued when, in fact, the nuts were bottomed out at the end of the threads.

Inspector Brown cautioned maintenance personnel to allow no more than two threads to protrude beyond the nut when installing hardware.

Part total time not reported.

POWERPLANTS AND PROPELLERS

HARTZELL

Hartzell; Model HC-D4N-3A; Broken Screw; ATA 6110

This propeller was installed on a Beechcraft Model B200 King Air aircraft.

The pilot reported experiencing occasional propeller sticking.

A technician investigated this defect and found a propeller blade preload adjustment setscrew broken at the jamnut. This failure allowed the nut to float freely within the hub. The jamnut wedging between the hub and the beta pickup plate caused the "sticking" the pilot reported. Due to the hub damage, the technician replaced the hub.

Part total time not reported.

PRATT & WHITNEY

Pratt & Whitney; Model PT6A-27; Power Section Case Defect; ATA 7250

This engine was installed in the number one position of a Beechcraft, Model 99 aircraft.

During a scheduled inspection, a maintenance technician discovered a hole in the engine case.

The hole in the power section case allowed hot engine gases to escape which damaged external wiring and transfer tubes in the area. (Refer to the following illustration.) The available evidence indicated a lightning strike caused the hole. The submitter did not offer any information concerning powerplant operating parameters resulting from this defect.

Part total time-23,956 hours.

AIR NOTES

SUBSCRIPTIONS

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In the past, we furnished the GPO subscription form in this publication. The older issues which contain the subscription form, may not have current pricing information. Since GPO controls price increases, contact GPO for current subscription information.

ELECTRONIC VERSION OF THE FAA FORM 8010-4, MALFUNCTION OR DEFECT REPORT

One of the recent improvements to the AFS-600 Internet web site is the inclusion of FAA Form 8010-4, Malfunction or Defect Report. This web site is still under construction and further changes will be made; however, the site is now active, usable, and contains a great deal of information.

Various electronic versions of this form have been used in the past; however, this new electronic version is more user friendly and replaces all other versions. You can complete the form online and submit the information electronically. The form is used for all aircraft except certificated air carriers who are provided a different electronic form. The Internet address is:

http://av-info.faa.gov/isdr/

When the page opens, select “M or D Submission Form” and, when complete, use the “Add Service Difficulty Report” button at the top left to send the form. Many of you have inquired about this service. It is now available, and we encourage everyone to use this format when submitting aviation, service-related information.

SERVICE DIFFICULTY PROGRAM DATA AVAILABLE ON THE INTERNET

The FAA, Service Difficulty Reporting (SDR) Program is managed by the Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The information supplied to the FAA in the form of Malfunction or Defect Reports, Service Difficulty Reports, or by other means, is entered into the SDR data base. This information has been available to the public through individual written request. This method has provided the aviation public with an invaluable source of data for research or finding specific problems and trends.

The Service Difficulty Reporting Program relies on the support of the aviation public to maintain the high quality of data. AFS-620 has included the SDR data on an Internet web site, which is now available to the public. Using the web site will expedite the availability of information. The Internet web site address is:

http://av-info.faa.gov

On this web site, select “Aircraft” along the top of the page, next select “Service Difficulty Reporting,” and then select “Query SDR Data.”

This web site is now active; however, it is still under development and improvements are being made. We ask for your patience, ideas, and suggestions. If you find the web site useful, let us know. Also, spread the word about the availability of information on the web site. To offer comments or suggestions, you may contact the web master or call Tom Marcotte at (405) 954-4391.

Please remember that the information contained in the SDR data base is only as good as the input we receive from the aviation public. Also, the data used in production of this publication is derived from the SDR data base. In that regard, we solicit and encourage your participation and input of information.

This publication, as well as many other publications, was previously included on the “FedWorld” internet site. The FedWorld site was terminated on April 15, 2000. The data previously listed there is presently being transferred to the “av-info” web site.

ADDRESS CHANGES

In the past, the Designee Standardization Branch (AFS-640) maintained the mailing list for this publication. Now, the Government Printing Office (GPO) sells this publication and maintains the mailing list; therefore, please send your address change to:

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Whether you mail or FAX your address change, please include a copy of your old address label, and write your new address clearly.

IF YOU WANT TO CONTACT US

We welcome your comments, suggestions, and questions. You may use any of the following means of communication to submit reports concerning aviation-related occurrences.

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You can access current and back issues of this publication from the internet at:
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This web site also has view, search, E-Mail, and M or D submit functions.

AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted between September 21, 2000, and October 19, 2000, which have been entered into the FAA Service Difficulty Reporting (SDR) System data base. This is not an all inclusive listing of Service Difficulty Reports. For more information, contact the FAA, Regulatory Support Division, Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The mailing address is:

FAA
Aviation Data Systems Branch, AFS-620
PO Box 25082
Oklahoma City, OK 73125

These reports contain raw data that has not been edited. If you require further detail please contact AFS-620 at the address above.

FEDERAL AVIATION ADMINISTRATION
Service Difficulty Report Data

Sorted by Aircraft Make and Model then Engine Make and Model. This Report Derives from Unverified Information Submitted By the Aviation Community without FAA review for Accuracy.

ACFT MAKE	ENG MAKE	COMP MAKE	PART NAME	PART CONDITION	DIFF-DATE	T TIME
ACFT MODEL	ENG MODEL	COMP MODEL	PART NUMBER	PART LOCATION	FAA REPORT NO.	TSO
REMARKS						
	GARRTT	ALIDSG	SEAL	FAILED	07/30/2000	2680
	TPE331*	310210610	31015701	LABYRINTH SEAL	2000100300049	
(CAN) DURING PRE-INSTALLATION INSPECTION, IT WAS NOTICED THAT THERE WAS EXCESSIVE GAP BETWEEN THE SEAL AND THE ROTOR. GAP WAS MEASURED AT 0.022 INCHES. IRM 72-IR-15 R9 STATES THAT THE GAP SHOULD BE NO LARGER THAN 0.010 INCHES.						
	PWA	PWA	PINION GEAR	SPALLED	04/18/2000	33700
	PW123D		311657901	2ND STG PINION	2000100400230	
(CAN) GEAR TEETH ON THE BULL GEAR AND BOTH SECOND STAGE PINIONS WERE SPALLED AND MISSING MATERIAL. THE WEAR PATTERNS OFTHE GEARS SHOWED HEAVY WEAR ON THE FRONT HALVES AND THE SPALLED SECTIONS WERE ALL IN THE FRONT HALF OF THE GEAR TEETH. NO ALIGNMENT ERRORS WERE FOUND NOR LUBRICATION OR RESIDUAL MAGNETISM SEEMED TO BE AT FAULT. THE NR 11 BEARINGS WERE FOUND TO HAVE MISMATCHED SERIAL NUMBERS. SEVEN RGB''S TO DATE WITH SIMILAR PROBLEMS HAVE BEEN REPORTED BY THE SUBMITTOR AND THE OPI IS AWARE AND REVIEWING THE SERVICE DIFICULTIES EXPERIENCED.						
AIRTRC	PWA		ROD	FRACTURED	07/13/2000	
AT401	R1340AN1		10992	MASTER ROD	2000101100122	447
DURING AGRICULTURAL SPRAYING OPERATION, NR 7 ROD ASSY FAILED FORCING AIRCRAFT TO EMERGENCY LANDING AND SUBSEQUENT SUBSTANTIAL AIRCRAFT DAMAGE. REF: ACCIDENT REPORT NR LAX00LA271. (X)						
AMD			PIN	BROKEN	11/27/1999	
FALCON			MY20248001	LT MLG DOOR	2000092900597	
AIRCRAFT LANDED AT BOISE, IDAHO WITH THE NOSE AND THE RIGHT MAIN LANDING GEAR EXTENDED WHILE THE LEFT MAIN LANDING GEAR REMAINED IN THE RETRACTED POSITION. INSPECTION OF THE LEFT HAND LANDING GEAR REVEALED THE PIN, PN MY20248-001 WHICH ISPART OF THE FORWARD GEAR DOOR LOCK, PN VTS4424, TO BE CORRODED (RUSTED) AT POINT OF ROTATION, AND CRACKED FOR SOME PERIOD. PIN FINALLY FAILED. SUBMITTER STATED THIS MAY HAVE BEEN PREVENTED BY A MORE DETAILED INSPECTION OF THE LANDING GEAR DOOR LOCKS. AMRGEN						
	LYC		FUEL CELL	DETERIORATED	09/15/2000	
AA5A	O360*			FUEL STORAGE	2000101400096	
(AUS) FUEL TANK ACCESS PANEL BONDED DOUBLER DISBONDED FROM WING SKINDUE TO CORROSION. FUEL LEAKING THROUGH TO OUTSIDE SKIN. FUEL TANK SEALING COMPOUND FOUND TO BE VERY SOFT AND LIFTING OFF IN SOME AREAS. WATER CONTAMINATION OF FUEL CELLS. SUBMITTER SUSPECTED WATER LEFT OVER FROM FUEL CELL DECONTAMINATION IN JANUARY 2000. SUSPECT IPA USED IN THE DECONTAMINATION PROCESS CAUSED THE DETERIORATION OF THE TANK SEALANT WHICH THEN LED TO THE CORROSION AND FUEL LEAKAGE. (X)						
AROFAL	ALLSN	ALLSN	GEAR SHAFT	SHEARED	02/01/2000	1312
OH58C	250C20C		23038229	GAS PRODUCER	2000100300248	
ENGINE WAS REMOVED FROM AIRCRAFT BECAUSE IT WAS GENERATING METAL IN THE OIL. AFTER DISASSEMBLY, IT WAS VIEWED THAT THEGEAR SHAFT IN QUESTION HAD SHEARED. THE SHAFT HAD SHEARED FROM WHERE IT MATES WITH THE MAIN GEAR PORTION OF THE PART.NO PROBLEMS WITH RELATED GEARS, BEARINGS, ETC., WERE FOUND TO SUBSTANTIATE A CAUSE FOR THE FAILURE. PART WAS RETURNED TO ALLISON FOR FAILURE ANALYSIS PER ALLISON BELL						
	LYC	BELL	BOOT	TORN	08/22/2000	
205A1	T5313B	205040004101	205040176101	MAIN DRIVE SHAFT	2000092900047	2064
(CAN) - LEAKAGE OF GREASE WAS DISCOVERED COMING FROM THE MAIN DRIVE SHAFT AFTER AIRCRAFT WAS SHUT DOWN . FURTHER INVESTIGATION REVEALED THAT THE BOOT WAS TORN THUS ALLOWING LEAKAGE OF GREASE FROM THE DRIVE SHAFT COUPLING.- NO INDICATION OF OVERHEATING.						
BELL	LYC	LYC	SUN GEAR	BROKEN	04/10/2000	
205A1	T5313B		103019204	REDUCTION	2000092900291	72500
(CAN) UPON FURTHER INVESTIGATION INTO WHY ENGINE WAS MAKING METAL, IT WAS FOUND THAT TWO TEETH HAD FRAGMENTED OFF THE GEAR. THE TEETH FRAGMENTS WERE .6250 INCH LONG AND WERE FOUND TRAPPED IN THE INTERNAL OIL SCREEN. THE CAUSE FOR THE GEAR FAILURE WAS NOT EVIDENT. AS SPECIFIED BY THE SUBMITTER AND IAW THE ENGINE MANUAL, THIS ENGINE COULD HAVE REMAINED IN SERVICE.						
BELL		BELL	SHAFT	WORN	06/19/2000	2976
206B3			206040221003	FREE WHEEL UNIT	2000100300233	
DURING OVERHAUL INSPECTION OF FREE WHEELING UNIT, IT WAS DISCOVERED THAT THE BEARING OUTER RACE HAD ROTATED IN THE HOUSING. ALSO THERE WAS EXCESSIVE WEAR IN THE HOUSING INTERNAL DIMENSION. WILL UPGRADE WITH BELL TECHNICAL BULLETIN 206-95-155 WITH SLOTTED OUTER SHAFT AND KEYED BEARING. SUBMITTER STATED THIS SHOULD PREVENT THIS CONDITION IN FUTURE.						
BELL	LYC	LYC	FUEL CONTROL	WORN	08/09/2000	5283
214B1	T5508D		216062022	N2 GOVERNOR	2000101700041	1801
(CAN) PERIODIC ENGINE N2 DROOP WITH POWER APPLICATION WITH SLOW RECOVERY WAS REPORTED. DURING SUBSEQUENT TROUBLESHOOTING, N2 DROOPED WITH NO NR RECOVERY UNTIL COLLECTIVE WAS CYCLED SEVERAL TIMES. N2 LEVER ON FUEL CONTROL UNIT APPEARS TO BE ROUGH WHEN CYCLED BY HAND. THE NOTED FCU WAS REMOVED AND REPLACED WITH A SERVICEABLE UNIT. (X)						
BOLKMS	ALLSN		MAST	FAILED	07/14/2000	6061
BO105C	250C20B	3638001009	4619305032M	MAIN ROTOR	2000092900017	671
(CAN) EVENT: DURING PILOT TRAINING OFF-LEVEL LANDING BEING CONDUCTED; A/C LANDED ON SLOPE WITH RT SKID LOW. PILOTS WERE CHECKING THEIR RESPECTIVE SIDES OF A/C AND A/C MOVED ON SLOPE. PILOT APPLIED CYCLIC INPUT WHEN THE A/C SLIPPED. WHEN A/C LIFTED INTO HOVER,TRAINING PILOT NOTICED MAST MOMENT IND. LIGHT ON STEADY, AND A/C RETURNED TO BASE. MAINT ACTION: MAINT MANUAL CHECKED FOR PROCEDURES WHEN MAST MOMENT LIMITS EXCEEDED. MAIN ROTOR STUDS WERE CHECKED FOR LOSS OF TORQUE. RESULTS OF TORQUE INSP REVEALED THAT ALL 12 NUTS HAD LESS THAN MIN 140 NEWTON METERS OF TORQUE 4 OF 12 NUTS MOVED APPROXIMATELY 1/4 OF FLAT TO BRING THEM UP TO TORQUE.						

BOLKMS ALLSN LINE LOOSE 11/22/1999
BO105S 250C20B GOVERNOR 2000100300246
NR 2 ENGINE DECELERATED DURING FLIGHT. ENGINE WAS SHUT DOWN AND A SINGLE ENGINE LANDING WAS MADE. UPON INVESTIGATION BY MAINTENANCE, THE PR LINE AT THE GOVERNOR WAS EXTREMELY LOOSE. TIGHTENED B-NUT AND ENGINE PERFORMED SATISFACTORY DURING POST RUN-UP. GOVERNOR AND CONTROL HAD RECENTLY BEEN REPLACED. NO TORQUE STRIPE WAS FOUND ON FITTING TO INDICATE ANY SLIPPAGE OF NUT. POSSIBLE CAUSE: LINE NOT TORQUED PROPERLY. ALL OTHER B-NUTS WERE CHECKED FOR PROPER TORQUE. (X)

CESSNA CONT IGNITION DIRTY 03/27/2000 24300
150L O200A C2925010105 INTERNAL 2000092200059
(CAN) ON MARCH 27, 2000, PILOT REPORTED ON CLIMB-OUT, ENGINE SUDDENLY RAN ROUGH AND COMPLETE ELECTRICAL FAILURE FOR 5 SECONDS. CHECKED ALL WIRING AND ENGINE FOR ANY ABNORMAL SIGNS. NONE FOUND. RAN FINE ON GROUND, ETC. OPENED IGNITION SWITCH AND FOUND A LITTLE DIRTY (BUT DRY). CLEANED CONTACT PLATES AND LUBRICATED WITH ELECTRICAL LUBE AND RE-ASSEMBLED.PERFORMED TEST FLIGHT AND FOUND NOT EVEN A STUTTER. AIRCRAFT WAS FLOWN 150 HRS SINCE THEN WITH NO DIFFICULTY. NOTE:SUBMITTER NOT POSITIVE THAT THE IGNITION SWITCH CAUSED THIS. COULD BE SOMETHING ELSE AND DID NOT THINK THE SWITCH WAS THAT BAD BUT COULD NOT FIND ANYTHING ELSE.

CESSNA LYC STATIC LINE KINKED 03/24/2000
172L O320E2D AIRSPEED & ALTIM 2000092200360
(CAN) THE AIRSPEED INDICATOR HAD BEEN REMOVED FOR MAINTENANCE, AND RE-INSTALLED. AIRCRAFT WHEN ON INITIAL FLIGHT AND AIRSPEED AND ALTIMETER DID NOT FUNCTION. THE CAUSE OF THE PROBLEM WAS THE STATIC LINE TO AIRSPEED WAS TOTALLY KINKED OFF. THE LINE WAS REPAIRED WITH A SATISFACTORY PITOT/STATIC TEST BEING CARRIED OUT.

CESSNA BUSHING WORN 09/08/2000 4943
172M 0532104 RUDDER 2000101700066
DURING INSPECTION, FOUND THE RUDDER HINGE BUSHINGS SEVERELY WORN. VISUAL INSPECTION OF THE BUSHINGS DID NOT REVEAL ANYNOTICEABLE WEAR. GENTLY PUSHING THE RUDDER AGAINST ITS STOPS WHILE WATCHING THE HINGE ALIGNMENT SHOWED ADDITIONAL MOVEMENT. THE FULL EXTENT OF WEAR BECAME APPARENT AFTER REMOVAL OF THE RUDDER. CABLE TENSION MUST BE REMOVED TO DETECT WEAR. THE AIRCRAFT WAS RETURNED TO SERVICE WITH NEW BUSHINGS. (X)

CESSNA LYC FUEL LINE CHAFED 08/25/2000 5564
172M O320E2D 050011874 FUEL LINE 2000092200213
(CAN) FUEL LINE LOCATED BETWEEN THE FUEL SELECTOR VALVE AND FUEL STRAINER AND PASSES UNDER THE COPILOTS RUDDER PEDALS.THE RUDDER PEDALS MOVE THE STEERING ROD RUBBED AGAINST THE FUEL LINE. THE FUEL LINE WAS RUBBED MORE THAN HALF THROUGH. (X)

CESSNA LYC KEEPER FAILED 07/17/2000
172N O320H2AD MS139973 CYLINDER 2000101100112
MAJOR DAMAGE TO THE ENGINE CAUSED AS A RESULT OF THE VALVE KEEPERS BREAKING AND ALLOWING THE EXHAUST VALVE TO FALL INTOTHE COMBUSTION CHAMBER FOR CAUSE APPEARS TO BE KEEPERS BROKE WHILE WEARING ON THE VALVE UNTIL RELEASE. THE VALVE BROKEAWAY FROM THE HEAD OF THE VALVE AND WAS DRIVEN THROUGH THE TOP OF THE CYLINDER AND ENDED UP INSIDE THE MUFFLER ALONG WITH LARGE CHUNKS OF THE PISTON WHICH BROKE OFF AND EXITED THROUGH THE NOW EMPTY EXHAUST PORT.

CESSNA FIREWALL CRACKED 09/18/2000
172P 0553006209 LOWER 2000101900157
FIREWALL CRACKS WHERE ENGINE COWLING SHOCK MOUNTS ARE ATTACHED TO THE LOWER FIREWALL AND FIREWALL REINFORCEMENTS. CRACKS APPEAR TO BE DUE TO THE AGE OF THE AIRCRAFT. AIRCRAFT TT, 12,705 HOURS. REPAIRS WERE MADE IAW CESSNA STRUCTURAL REPAIR MANUAL. THIS IS A WELL MAINTAINED AIRCRAFT AND IS USED IN A FLIGHT TRAINING ENVIRONMENT. (X)

CESSNA RESERVOIR CRACKED 09/15/2000
172R 051600918 LOWER, L/E 2000101900156
PILOT REPORTED FUEL DRIPPING FROM UNDER ACFT. MECH DETERMINED IT WAS DRAIN VALVE. DRAIN VALVE REPLACED. FUEL CONTINUED TO DRIP FROM THE VALVE. INVEST SHOWED THE LEAK WAS COMING FROM THE LOWER LEADING EDGE SEAM OF THE RESERVOIR TANK. AFTER REMOVAL, 2 INCH CRACK IN THE WELD WAS VISIBLE UPON INSP. NO OBVIOUS CAUSE OF THE FRACTURE WAS VISIBLE. POSSIBLE CAUSE MAY BE FROM RESERVOIR TANK FLEXING FROM BUILT-UP VENT PRESSURE AND THE WEIGHT OF THE FUEL. INSP OF THIS ITEM ON A SCHEDULED BASIS SHOULD BE ACCOMPLISHED TO DETERMINE CONDITION. SUBMITTER STATED IF SEAM WOULD FAIL DURING FLIGHT, ALL FUEL ONBOARD WOULD BE LOST AND ENGINE WOULD STARVE FOR FUEL. (X)

CESSNA LYC LYC PLUG WORN 06/08/2000 688
172S IO360L2A LW11775 ALL CYLINDERS 2000092200062
PERFORMED LYC SI 1492B. DURING THE PHASE 2 INSPECTION, OIL FILTER REMOVED AND CUT OPEN FOR INSPECTION. AN EXCESSIVE AMOUNT OF ALUMINUM FLAKES WERE DISCOVERED. ALL 4 CYLINDERS REMOVED ENOUGH TO INSPECT AND REPLACED 8 WORN PISTON PIN PLUGS WITH P/N 60828 PLUGS. RE-INSTALLED CYLINDERS WITH NEW CYLINDER BASE SEALS, INTAKE GASKETS, PUSHROD SEALS AND VALVE COVER GASKETS. PERFORMED OPERATIONAL CHECK, CHECKED SATISFACTORY. (X)

CESSNA SEAT TRACK CORRODED 09/21/2000
177RG 201101510 2000101900168
INTERGRANULAR CORROSION FOUND ON VERTICAL LEG OF SEAT TRACK STARTING AT LAST SEAT ADJUSTMENT PIN HOLE (APPROX 20.25 INCHES FROM MOST FORWARD HOLE). CORROSION STARTED AT AFT EDGE OF HOLE AND PROGRESSED AFT ONE INCH. SURFACE METAL ON RIGHTSIDE OF VERTICAL LEG WAS FOUND EXFOLIATING APPROXIMATELY 2.5 PERCENT OF TOTAL THICKNESS. POSSIBLE CAUSE IS EXPLAINED IN AC 43.13-1B, PAGES 6-17 AND CESSNA

CONT CONT COOLER LEAKING 06/21/2000
182 O470L 8524295 CORE 2000101900056
PART HAD BEEN REPAIRED USING EPOXY TO STOP A LEAK. DURING NORMAL SERVICE, EPOXY FAILED CAUSING THE OIL COOLER TO LEAK AT POINT OF ORIGINAL REPAIR. SUBMITTER RECOMMENDED ELIMINATING USE OF EPOXY IN OIL COOLERS AS EPOXY FAILURE IS COMMON.(X)

CESSNA BULKHEAD CRACKED 10/12/2000
182P 07126161 BS 230.187 2000101900112
NEW PART AS RECEIVED FROM CESSNA. RE-INSTALLATION INSPECTION FOUND THE .3750 INCH DIAMETER BOLT HOLES ELONGATED AND OVERSIZED, EXCEEDING THE ACCEPTABLE LIMITS FOR BOLT HOLES LISTED IN AD 7207-09 PARA C)2)B) AND CESSNA SL SE 72-3. DETERMINED THE FINISHING PROCESS USED IN AREA OF RUDDER CABLE CUT-OUTS WOULD BE HIGHLY CONDUCIVE TO CRACKING. THIS INCLUDED SCORING, GOUGING IN THE CORNER RADII, AND THINNING OF THE MATERIAL THICKNESS, AT ONE POINT PRODUCING A KNIFE EDGE. THESE DEFECTS WERE MADE WITH A SANDER OR SIMILAR TOOL. RUDDER CABLE CUT-OUTS ARE WITHIN THE CRITICAL AREAS FOR POTENTIAL CRACKING AND INSPECTION REFERRED TO IN AD 72-07-09 AND CESSNA SL SE72-3 AND SE27-29. (X)

CESSNA WIRE SHORTED 03/27/2000 1917
182Q ALT BREAKER 2000092200067
PILOT WAS FORCED TO LAND DUE TO SMOKE IN COCKPIT. INSP REVEALED ALTERNATOR POWER WIRE (WIRE NR PB-10) FROM ALT TO THE ALT OUTPUT CIRCUIT BREAKER TO BE HEAT DAMAGED. WIRE IS AN EIGHT-GAUGE SHIELDED WIRE WITH ALTERNATOR OUTPUT POWER IN THECENTER CONDUCTOR AND THE SHIELDING GROUNDED TO AIRFRAME GROUND. FOR AN UNKNOWN REASON, SHIELDING CHAFED THROUGH TO POWER CONDUCTOR AND CAUSED A DIRECT SHORT TO GROUND. APPROX 6 INCHES OF THE WIRE SHOWED DAMAGE, INSULATION MELTED OFF BETWEEN POWER CONDUCTOR AND SHIELDING AND MUCH OF THE SHIELDING MISSING DUE TO ARCING. DAMAGED SECTION OF WIRE REPLACED WITH MIL-W-22759/16-8, AND SHIELDING INSPECTED ADJACENT TO DAMAGED AREA. NO OTHER CESSNA

CESSNA PULLEY BURRED 09/26/2000 79
182S 12601121 QUADRANT 2000100300060
WHILE PERFORMING SB 00-27-02, DATED AUGUST 14, 2000, TO INSPECT FOR PROPER RADIUS WHERE INTERCONNECT CABLE IS ATTACHED TO QUADRANT, AILERON CABLE 0510105-328 WAS FOUND SEVERELY WORN. CABLE WEAR WAS WHERE CABLE CONTACTED PULLEY GROOVE (OUTER SECTION OF 1260112-1 PULLEY) OVER HOLE DRILLED FOR NAS561-6-32 PIN (INNER SECTION OF PULLEY) WHICH ATTACHES PULLEY TOAILERON CONTROL TUBE ASSEMBLY, FORWARD OF YOKE. (DIGITAL PICTURES AVAILABLE ON REQUEST). REF: OPER CONTROL NR 200002. (X)

CESSNA HINGE CRACKED 10/12/2000
190 0322709 LT & RT INBOARD 2000101900108
FOUND BOTH INBOARD AILERON HINGE BRACKETS CRACKED COMPLETELY THROUGH THE BEARING BOSS. THESE BRACKETS WERE MADE FROM MAGNESIUM AND SUFFER CORROSION PROBLEMS. APPROXIMATELY 40 POUNDS OF PRESSURE SEPARATED THE AILERON FROM ITS HINGE/ATTACHON THE INBOARD END. (X)

CESSNA SPAR CRACKED 10/12/2000
195A 033422013 OUTBOARD TIP 2000101900107
BOTH ELEVATOR SPARS CRACKED VERTICALLY INITIATING IN BEND RADIUS OF FLANGE TO MOUNT TIP RIB. THIS APPEARS TO BE FROM TORSIONAL FLEXING DUE TO THE HEAVY COUNTERWEIGHT OPPOSING AIR LOADS. (X)

CESSNA CESSNA RIB CRACKED 03/22/2000 294
206H 07221892 RT WING 2000101100105
DURING 100-HOUR INSPECTION, DISCOVERED THE RT WING LEADING EDGE NOSE RIB LOCATED AT STA 136.00 CRACKED AT THE LIGHTENING HOLE. SUBMITTER SUSPECTED PART WAS DAMAGED DURING INITIAL INSTALL AT THE FACTORY ASSY LINE. (X)

CESSNA CESSNA TANK LEAKING 03/22/2000 294
206H 121640752 RT SUBFLOOR 2000101100106
DURING 100-HOUR INSPECTION, DISCOVERED THE RT AUXILIARY FUEL TANK LEAKING FROM A JOINT WELD LOCATED ON THE TOP LEFT SIDE, AND LEAKING FROM THE AFT SIDE OF THE TANK WHERE THERE WAS EVIDENCE OF THE ELECTRODE TOUCHING THE TANK DURING ITS PRODUCTION, AND BURNING A HOLE THROUGH THE SIDE. NOTE: SUBMITTER STATED THIS HOLE WAS NOT LOCATED ON AN EXISTING WELD OR NEAR A FITTING. (X)

CESSNA LYC ENGINE FAILED 06/05/2000
206H IO540AC1A5 2000092600127
PILOT REPORTED ENGINE SURGING ON TAKEOFF WITH SIGNIFICANT FUEL FLOW FLUCTUATION WHICH WAS CORRECTED WITH A DECREASE IN ENGINE POWER BY ADJUSTMENT OF THE PROP CONTROL AND ACTIVATION OF THE STANDBY ELECTRIC FUEL PUMP. POST-GROUND RUNS DUPLICATED THE PROBLEM, BUT NORMAL SYSTEMS CHECKS SATISFACTORY. THREE FOLLOW-UP TEST FLIGHTS PERFORMED, PROBLEM RECURRED IN ONLY 2 OF THE FLIGHTS, BOTH DURING TAKEOFF ROLL. INSPECTION OF THE AIRCRAFT FUEL SYSTEM DID NOT REVEAL ANY CONTAMINATION, OBSTRUCTIONS, OR LEAKAGE. MANUFACTURER RECOMMENDED SWAPPING FUEL SERVOS WITH ANOTHER SAME AIRCRAFT TO DETERMINE IF THE PROBLEM FOLLOWED THE SERVO. ACCOMPLISHED RECOMMENDATION, AND

CESSNA LYC LINE DAMAGED 03/13/2000 267
206H IO540AC1A5 1200406249 HEADER TANK 2000101100108
DURING A 100-HOUR INSPECTION, FOUND FUEL LINE FROM FUEL BOOST PUMP TO LT HEADER TANK LEAKING AT THE HEADER TANK FITTING. UPON REMOVAL OF LINE, DISCOVERED DAMAGED FLARE. AIRCRAFT TT 288.7 HOURS. (X)

CESSNA PWA SELECTOR LEAKING 08/01/2000
208B PT6A114 201314217 2000100300037
(CAN) IN FLIGHT PILOT NOTICED A DISCREPANCY BETWEEN COPILOT AND PILOT AIR SPEED AND ALTIMETER. PILOT RETURNED TO MAINTENANCE BASE AND FOUND BODY OF SELECTOR VALVE SPARATED FROM DASH MOUNT PLATE CAUSING LARGE STATIC LEAK. VALVE WAS REMOVED,REASSEMBLED USING ORIGINAL PARTS AND REINSTALLED IN AIRCRAFT. LEAK CHECKED OK AND RETURNED TO SERVICE.

CESSNA PWA PARKERHANFIN BOLT SHEARED 07/03/2000
208B PT6A114 40179 10320400 BOLT 2000100400085
(CAN) WHILE CARRYING REGULAR MAINT ON A/C, NOTICED ONE NUT WAS MISSING FROM WHEEL HUB BOLTS. UPON FURTHER INVESTIGATION, FOUND THAT BOLT HAD SHEARED AND NUT HAD FALLEN OFF, AT WHICH POINT, BOLT BACKED OUT OF HUB AND HIT BRAKE TORQUE PLATE, BENDING BOLT AND SCORING TORQUE PLATE. WHEEL AND TORQUE PLATE WERE REPLACED. BOLT HAD 173.7 HRS SINCE NEW. IT WAS REPLACED AT LAST TIRE CHANGE. STANDARD PROCEDURE IS ALL WHEEL HUB BOLTS ARE REPLACED AT TIRE CHANGE AND TORQUED IAW MFGSSPECS. THIS IS SECOND OCCURENCE OF THIS BOLT FALLING IN LAST 2 YRS. BOLT PART NUMBER IS 103-20400, BUT MAY ALSO

CESSNA CHECK VALVE FAILED 01/31/2000 705
310R 1H374 ENGINE COMPART 2000092200068
DURING ROUTINE MAINTENANCE, DISCOVERED 2 UNSERVICEABLE CHECK VALVES, PN''S 1H37-4, FOR THE PNEUMATIC DEICE SYSTEM. BOTH VALVES HAVE 21 MONTHS AND 705.1 HOURS SINCE NEW. THESE VALVES CALL FOR YEARLY INSPECTIONS STARTING AT 5 YEARS FROM NEW THOUGH 10 YEARS REPLACEMENT. THE MANUFACTURER HAS BEEN NOTIFIED AND ONE VALVE HAS BEEN SENT FOR THEIR EVALUATION. (X)

CESSNA FUEL LINE WORN 09/13/2000 6300
340CESSNA 560010631 NACELLE/FIREWAL 2000101700095
DURING INSTALLATION OF FUEL LINE CROSSFEED KIT NR SK340-31-6, REMOVAL OF THE OLD LINES REVEALED THAT TWO LINES HAD NEARLY BEEN WORN THROUGH DUE TO CONTACT WITH INSPECTION PANEL SCREWS. THE ORIGINAL TUBING WAS PROTECTED BY THE ABRASION CUSHIONS, BUT THE EXTENT OF DAMAGE WAS NOT EVIDENT UNTIL THE CUSHION WAS PEELED OFF. VERY LITTLE CLEARANCE IS AVAILABLE ATTHIS POINT, AND NEARLY IMPOSSIBLE TO DETECT ANY DAMAGE DURING INSPECTIONS. IF THIS CONDITION GOES UNDETECTED, THE NEW TUBING WILL ALSO BE DAMAGED. NUTPLATE/SCREW CLEARANCE FROM FUEL TUBING MUST BE VERIFIED. (X)

CESSNA WINDOW DEPARTED 06/20/2000
340CESSNA 531126111 2000101900125
AT FLIGHT LEVEL 11,500 FEET, WINDOW BLEW OUT. DETERMINED THAT CESSNA SB HAD NOT BEEN DONE (SK340-26).
CESSNA CONT TUBE RUSTED 09/04/2000
402C TSIO520UB 50934042 INSIDE TUBE 2000101900146
REMOVED RIGHT ELEVATOR FROM AIRCRAFT TO REPLACE HINGE BEARINGS. CLEANED INSIDE TUBE AND NOTICED 3 RUSTED HOLES THROUGHTUBE. REPLACED TUBE WITH NEW AND LUBED INSIDE TUBE. (X)
CESSNA CONT ENGINE FAILED 09/07/2000
402CESSNA TSIO520E ENGINE 2000101900046
(CAN) ENGINE WAS SENT OUT FOR A PROP STRIKE INSPECTION TO AN APPROVED ENGINE OVERHAUL SHOP. AFTER REINSTALLATION PROBLEMS OF FLUCTUATING INTERMITTENT OIL PRESSURE OCCURRED, TROUBLESHOOTING AND INVESTIGATION OF OIL PRESSURE SYSTEM LED TO THE FINDING OF A PIECE OF MASKING TAPE 23 INCHES LONG IN THE OIL PAN WHICH OBSTRUCTED INTERMITTENTLY THE OIL PRESSURE SCREEN AND LED TO THE RELATED PROBLEM. AIRCRAFT FLIGHT TESTED SATISFACTORY AND RETURNED TO SERVICE. (X)
CESSNA TAPER PIN LOOSE 04/26/2000
421C 50934032 TORQ TUBE 2000092200209
ELEVATORS IN ACFT ARE ATTACHED TO A FLANGED COLLAR WITH TAPER PIN, PN 5035017-1. TAPER PIN WORKED LOOSE WHICH OVALED OUT THE HOLES IN THE COLLAR AND TORQUE TUBE. AT INSP, COULD HOLD ONE ELEV RIGID, MOVE OTHER ELEV APPROX 1 INCH ON BOTH SIDES. CESSNA TECH REPS ACKNOWLEDGED THIS HAS BEEN A PROBLEM ON THE 421. THE ONLY APPROVED CESSNA REPAIR IS TO REPLACE COLLAR WITH NEW STYLE COLLAR TWICE AS LONG, ALLOWS A HOLE TO BE DRILLED THRU TORQUE TUBE OTBD. NEW COLLAR INSTALLED ONACFT DURING PREV REPAIR OF SAME CONDITION. ONLY APPROVED REPAIR TO 2ND OCCURRENCE IS TO INSTALL A NEW TORQUE TUBE ASSYTHAT COMES WITH SHORTER COLLAR. ALLOWS CYCLE TO BEGIN AGAIN INSTEAD OF A FIX. (CANNOT PURCHASE
CESSNA GARRTT ALIDSG GOVERNOR MALFUNCTIONED 10/06/2000
441 TPE3318 2000101900097
PILOT REPORTED THAT AFTER ENGINE SHUT-DOWN OF A NORMAL FLIGHT, OIL WAS NOTICED LEAKING PROFUSELY FROM THE RIGHT COWLING. FURTHER INVESTIGATION REVEALED THE OIL LEAK WAS ORIGINATING FROM THE PROP GOVERNOR BASE FLANGE SEAM. IT WAS VERIFIED BY A MECHANIC THAT THE FLANGE GASKET WAS NOT THE SOURCE OF THE LEAK, BUT THE SEAM ON THE GOVERNOR WAS. GOVERNOR TIMEIN SERVICE: 17.8 HOURS. (X)
CESSNA HOSE SEPARATED 07/31/2000
R182 S217840096 NOSE GEAR 2000100400021
HOSE SEPARATED AT SWAGED END CAUSING LOSS OF FLUID AND NOSE GEAR TO FALL INTO AIRSTREAM. CESSNA INSPECTION CHECKLIST CALLS OUT FOR THIS HOSE ALONG WITH REST OF LANDING GEAR HOSES TO BE REPLACED ON CONDITION FOR THIS AIRCRAFT. SUBMITTER RECOMMENDED CHANGING REQUIREMENT TO 5 TO 8 YEAR LIFE ON
CESSNA FIREWALL CRACKED 10/13/2000 92
T206H 12536072 LWR RT DIAG STRP 2000101700062
DURING FIRST ANNUAL INSPECTION, FOUND CRACK IN DIAGONAL SUPPORT ACROSS LOWER RIGHT FIREWALL. CRACK APPEARS TO BE CAUSED BY A MANUFACTURING DEFECT. (X)
CESSNA LYC LANYARD MISSING 08/09/2000 92
T206H TIO540AJ1A 12509981 2000101700067
LANYARD AND ALL ATTACHING HARDWARE FOUND MISSING AND NO SIGN OF EVER BEING INSTALLED DURING FIRST ANNUAL INSPECTION. SUBMITTER STATED THIS DEFECT COULD CAUSE AN IN-FLIGHT FIRE. (X)
CESSNA LYC LYC BOLT MISSING 10/13/2000 92
T206H TIO540AJ1A 2000101700069
FOUND FORWARD SECURING BOLT MISSING FROM INTAKE PLENUM. SUBMITTER STATED THERE WAS NO SIGN OF EVER BEING INSTALLED. (X)
CHILD FITTING CRACKED 09/01/2000
S2BPITTS 22107001 WING ATTACH 2000100400117
(AUS) RIGHT LOWER WING ATTACHMENT FITTING CRACKED PER PITTS SERVICE BULLETIN 25. (X)
CVAC PWA PWA CYLINDER CRACKED 07/08/2000
PBY5A R183092 84085A1 CYLINDER 2000100300260 66800
(CAN) DURING CLIMB OUT , THE RIGHT ENGINE STARTED TO RUN ROUGH. THE PILOT FEATHERED THE ENGINE AND RETURNED TO YELLOWKNIFE .MAINTENANCE FOUND 2 CRACKS AT THE EXHAUST PORT OF NR 7 CYLINDER OF THE RT ENGINE. THESE HAD STARTED TO SPREAD AND LIKELY CAUSED THE EXHAUST VALVE TO MALFUNCTION. MAIN OIL SCREEN CHECKED AND SUMP DRAINED, NO CONTAMINATION FOUND. THECYLINDER WAS REPLACED, ENGINE GROUND RUN AND RETURNED TO SERVICE. (X)
DHAV PWA DHAV TAB LOOSE 07/14/2000
DHC3 PT6A135 C3TE1111 C3TE1312 LEVER 2000100300223
(CAN) WHILE CARRYING OUT THE 100 HOUR INSPECTION OF THE SERVO TAB, THE ENGINEER NOTICED THAT THERE WAS EXCESSIVE PLAY IN THE ELEVATOR SERVO TAB OPERATING LEVER. UPON FURTHER INVESTIGATION, FOUND THE SERVO TAB HAD TO BE REPLACED DUE TO WEAR ON THE OPERATING LEVER BOLT HOLE. SUBMITTER STATED IT SHOULD BE NOTED THAT NUMEROUS PROBLEMS HAVE BEEN FOUND IN THIS AREA. WOULD IT NOT BE WISE TO MANDATE A 50 HOUR INSPECTION OF THE SERVO TABS?
DHAV PWA CABLE FRAYED 07/14/2000
DHC3 PT6A135 VALC3UF619 WATER RUDDER 2000100300224
(CAN) WHILE CARRYING OUT AN INSPECTION OF THE WATER RUDDER CABLES, THE ENGINEER FOUND THE WATER RUDDER STEERING CABLE THAT ATTACHES TO THE RUDDER BELLCRANK BELOW THE PILOTS FLOOR WAS SEVERELY FRAYED WHERE IT CONTACTS THE FORWARD PULLEY ON THE BACKSIDE OF THE FIREWALL. THE CABLE WAS DHAV PWA DHAV
BELLCRANK TWISTED 07/03/2000
DHC6200 PT6A27 C6CF11371 C6CF113711 CABLE QUADRANT 2000100400087
(CAN) WHILE CARRYING OUT AD CF-72-06R4 PART III, THE ELEVATOR QUADRANT WAS FOUND TO BE RUBBING AGAINST THE SIDE OF THE CABLE GUARD AS DESCRIBED IN THE AD. THE QUADRANT ASSEMBLY INCLUDING SUPPORT BRACKET WAS REPLACED PRIOR TO FLIGHT. (X)
DHAV PWA DHAV RIB LOOSE 01/06/2000 23987
DHC6300 PT6A27 C6WF10023 C6WF110067768 FLAP CNTRE HINGE 2000100300151
(CAN) EXCESSIVE LOOSENESS BETWEEN THE TWO HALVES OF THE FLAP AT THE CENTER HINGE ARM POSITION. THE RIBS ON EITHER SIDE OF THE HINGE ARM ARE ASSEMBLED TO THE ARM BY THE USE OF LONG MS20470AD5 SOLID RIVETS. IT WOULD APPEAR THAT THERE HAS BEEN SOME WORKING BETWEEN THE RIVET HEADS (MANUFACTURES) AND THE OUTBOARD RIB WHICH HAS CAUSED WEARING OF THE RIB AROUND THE RIVET HOLES. (X)

DHAV PWA DHAV CONTROL ROD CRACKED 05/14/2000
DHC6300 PT6A27 C6CW108727 FROM RIVET HOLE 2000101100103
(CAN) DURING INSPECTION THE SERVO TAB LINK FOR THE AILERON WAS FOUND CRACKED AT THE UPPER END. THE CRACK EXTENDED FROM THE ROD END BEARING RETENTION RIVET HOLE TO THE END OF THE ROD. FOR REFERENCE SEE DEHAVILLAND IPC 27-10-00, FIG. 5 (SHEET 1 OF 1), ITEM 90. THE ROD WAS REPLACED AND THE AIRCRAFT RETURNED TO SERVICE.
GULSTM LYC LYC NUT SEPARATED 06/14/2000
500B IO540E1A5 LW12186 2000101700138 1380
LEFT ENGINE LOST OIL PRESSURE. FEATHERED IN-FLIGHT. DISASSEMBLED ENGINE. ROD, P/N 75061, ON NR 4 CYLINDER BROKEN ANDIT LOOKS AS IF ONE NUT CAME LOOSE CAUSING THE FAILURE. (X)
GULSTM GARRTT OZONE ACCUMULATOR FAILED 08/08/2000
695A TPE33110 EA1563 PRESS RELIEF 2000092200212 3
(CAN) A/C JUST COMPLETED ROUTINE 100 HR INSP. HYDRAULIC ACCUMULATOR REGULATOR ASSY REPLACED DUE TO LEAKING ACCUMULATOR (INTERNAL). IT WOULD NOT STORE FLUID PRESSURE: ZERO HR T.S.O. PART INST FUNCTION TESTS AND POST INSP CHECK FLT CARRIED OUT NO FAULT FOUND. ON ROUTINE FLT TO BANGOR CREW SELECTED GEAR DOWN, HYDRAULIC SYS PRESSURE DROPPED TO ZERO. GEAREMERG EXTENSION PROCEDURES WERE APPLIED, GEAR LOCKED DOWN A/C RETURNED TO BASE A/C LANDED AND TAXIED TO HANGAR. ELECTRO-PUMP - BACKUP WORKED NORMAL FOR BRAKES AND STEERING. NO HYD FLOW LIGHTS WERE ON. HYD PUMPS WORKING OK. NO FLUID LOSS OR EXTERNAL LEAKAGE EVIDENT. GROUND TESTS INDICATE FLUID BYPASSING WITHIN ACCUMULATOR. (X)
GULSTM LYC CABLE LOOSE 09/06/2000
GA7 O320D1D 7C1015015 RUDDER CABLES 2000101900043
(CAN) RUDDER CABLE TENSION NOT WITHIN SPECS - TOO LOOSE - SUSPECT REVERSAL OF RUDDER PEDAL BELLCRANK (7C10302-2) IF CABLE TENSION IS NOT WITHIN SPECS THIS BELLCRANK CAN BE REVERSED AND ARM CAN TRAVEL UNDER SHAFT. SPRING 7C10415-5 KEEPS THIS ARM IN POSITION. (FOUND ONE OF THESE SPRINGS PREVIOUSLY BROKEN CAUSING A SIMILAR OCCURRENCE - GROUND ONLY) RUDDER SYSTEM RIGGED PER S.M. (X)
GULSTM VALVE LOOSE 03/03/2000 3648
GIV 573801 TE FLAP 2000092900595
FLAP ACTUATION SLUGGISH WITH ENGINE RUNNING. WOULD NOT OPERATE USING AUXILIARY SYSTEM. FOUND FLAP SELECTOR VALVE INTERNAL SPOOL ACCESS CAP HAD NEVER BEEN SAFETIED (NO SAFETY WIRE MARKS ON UNIT) AND HAD BACKED OUT 3 TURNS. REPLACED SELECTOR VALVE (REPLACEMENT UNIT WAS SAFETIED WITH LEAD SEAL). OPERATION NORMAL. (X)
GULSTM BRAKE DAMAGED 05/31/2000 595
GV AHA2163 1159SC15403 NR 2 MLG 2000092900392
WHILE REMOVING NR 2 MAIN WHEEL ASSY FOR A TIRE CHANGE, NOTED ON THE BRAKE INSPECTION THAT THE OUTBOARD ROTOR KEYWAY SLOT CLIPS WERE BREAKING AWAY FROM THE ROTOR. WHEEL ASSY HAD SOME DAMAGE FOR LOOSE CLIPS. BRAKE AND WHEEL ASSYS WERE BOTHREPLACED. (X)
LEAR JACKSCREW GALLED 02/11/2000
35A STABILIZER 2000092900569 501
CREW BEGAN TO DESCEND OUT OF CRUISE, AIRCRAFT BECAME NOSE HEAVY. THE CREW COULD NOT TRIM AIRCRAFT STABILIZER AS BOTH PRIMARY AND SECONDARY PORTIONS OF THE STAB ACTUATOR FUNCTIONALLY FAILED. THIS UNIT HAD APPROXIMATELY 500 HOURS ON IT SINCE ITS 12,000 HOUR INSPECTION. POSSIBLE CAUSE WOULD BE FAILURE OF A STAB ACTUATOR COMPONENT COMMON TO BOTH PRIMARY AND SECONDARY MOTORS, POSSIBLY A GALLED JACK SCREW ASSEMBLY. TEAR DOWN REPORT CONFIRMED A GALLED JACK SCREW ASSEMBLY. SUBMITTER RECOMMENDED CHANGE IN JACK SCREW DESIGN TO INCREASE SURFACE AREA OF SCREW ASSEMBLY THEREBY REDUCING THE CONTACT SURFACE LOADING ON THE SCREW ASSEMBLY. (X)
MOONEY LYC LYC FUEL CELL LEAKING 12/23/1999
M20D O360A1D LT FUEL CELL 2000092200058
(CAN) LEFT FUEL CELL WAS FOUND LEAKING ON NOVEMBER 1999. LEAK WAS REPAIRED ON NOV 28, 1999. LEAK WAS THEN NOTICED AGAIN SHORTLY THEREAFTER. LEAK APPEARED TO COME FROM FORWARD WALL OF CELL. LOWERED FUEL LEVEL UNTIL FUEL SHOWED DRYING INAREA. AT THIS LEVEL AT THE FORWARD TOP EDGE OF CELL THE SEALANT WAS FOUND LOOSE (EASY TO PEEL OFF). AREA WAS PROBABLYNOT CLEANED BEFORE APPLICATION. REMOVED SEALANT ON WHOLE UPPER EDGE OF FORWARD WALL AND RESEALED. NOW DOES NOT LEAK.(X)
MTSBSI GARRTT HARTZL BLADE MISOVERHAULED 10/05/2000 971
MU2B60 TPE33110 LT10282NB53R BLADE AIRFOIL 2000101900042
CUSTOMER WORK ORDER WAS OPENED TO DYNAMIC BALANCE PROPELLERS. UPON INSPECTION OF THE AIRCRAFT, THE BLADES WERE FOUND NOT TO BE SHOT PEENED IN ACCORDANCE WITH AD 95-01-02. THE PROPELLERS HAD BEEN PREVIOUSLY OVERHAULED BY YINGLING AIRCRAFT, INC., ON 7-31-2000. BOTH PROPELLERS WERE REMOVED FOR OVERHAUL AND AD COMPLIANCE. PROPELLER SERIAL NUMBERS: CDA3361,CDA3363. BLADE SERIAL NUMBERS: H57913, H57910, H57908, H57916, H57911, H57912, H57909, H57917. (X)
PIPER FRAME CORRODED 06/05/2000
PA23250 1713444 2000101700139
FUSLAGE FRAME TUBES FOUND BADLY CORRODED ON ANNUAL INSPECTION. WATER SOAKED INSULATION FOUND IN CONTACT WITH AFFECTED TUBES. SUBMITTER SUSPECTED WATER INGRESS FROM BADLY FITTING CABIN DOOR AND PV WINDOW SEALS. SUBMITTER RECOMMENDED THEUNDER FLOOR AREA BELOW THE CABIN DOOR AND PV WINDOW BE INSPECTED ON ALL AIRCRAFT OF A SIMILAR DESIGN TO THE PA23 FOR WATER INGRESS, AND CORROSION. DAMAGED AND WATER SOAKED INSULATION BLANKETS BE REPLACED. EXTRA WATER DRAINS BE INSTALLED TO LOWER FUSELAGE AREA IN ORDER TO MINIMIZE THE RISK OF WATER PUDDLES FORMING. (X)
PIPER BOLT DAMAGED 06/22/2000
PA28140 AN311 STABILATOR 2000101700145
DURING ANNUAL INSPECTION, THE CONTROL SURFACES WERE FOUND TO HAVE NEVER BEEN RE-BALANCED AFTER THE AIRCRAFT HAD BEEN RE-PAINTED SOMETIME PRIOR. WHEN REMOVING THE STABILATOR, IT WAS FOUND THAT THE MOUNTING BOLTS COULD NOT BE REMOVED WITHOUT BEING CUT OFF. ON CLOSER INSPECTION UPON REMOVAL, THE BOLTS HAD BEEN DEFORMED WITH A JOGGLE/BEND FORMED IN THE SHANK. AFTER REMOVING PAINT FROM THE BOLT HEADS, FOUND THAT AN3 BOLTS WERE INSTALLED INSTEAD OF THE STRONGER NAS1104-17 AS SPECIFIED IN THE PARTS MANUAL. PRIOR TO REMOVAL, THE BOLTS APPEARED NORMAL AND UNDAMAGED. HIGH LOADS ON THE STABILATOR AND INCORRECT HARDWARE WERE POSSIBLE CAUSES. (X)
PIPER LYC PIPER SCREW WORN 06/14/2000
PA28140 O320E2A 6577800 6367400 THUMB SCREW 2000100300099
(CAN) THE RETAINING BOLT FOR THE AIR FILTER HOUSING BACKED OFF FROM THE TORQUED POSITION AND ALLOWED THE HOUSING TO MOVE FORWARD AND STRIKE THE PROPELLER DURING FLIGHT. A VIBRATION WAS FELT BY THE PILOT AND HE RETURNED THE AIRCRAFT TO BASE AND LANDED SAFELY. MAINTENANCE INSPECTION REVEALED THAT THE FIBER LOCK ANCHOR NUT IN THE AIR FILTER HOUSING WAS IN WORN CONDITION WITH LITTLE OR NO LOCK FEATURE REMAINING. A FLEET CAMPAIGN TO CHECK ALL SIMILAR INSTALLATION IS IN PROGRESS.

PIPER FUEL CAP SWOLLEN 07/13/2000 21
PA28181 462056 GASKET 2000101100066
THESE GASKETS APPEAR NOT TO BE COMPATIBLE WITH 100LL FUEL. THE MATERIAL USED CONTINUED TO SWELL AND RIP AFTER ONLY A SHORT PERIOD OF TIME. (X)

PIPER ALTERNATOR BROKEN 06/15/2000 147
PA28181 ES4032 2000101700142
HOLES DISCOVERED IN LOWER AND UPPER ENGINE COWLING ON LEFT SIDE. REMOVED COWL AND FOUND ALTERNATOR COOLING FAN BROKEN CAUSING DAMAGE TO COWL. REPAIRED COWL AND REPLACED FAN ASSY WITH NEW PART. SUBMITTER STATED IT APPEARED THAT THE ''DISHED'' FRONT PLATE WAS ON BACKWARDS. (X)

PIPER FUEL TANK CONTAMINATED 09/14/2000
PA28235 6399816 CTR LT WING 2000101900119
DURING ANNUAL INSPECTION, THE MAIN FUEL SUMP SCREEN WAS FOUND ALMOST COMPLETELY BLOCKED WITH A REDDISH/BROWN MATTER. THE FUEL TANKS'' INTERIOR WAS INSPECTED AND FOUND TO HAVE BEEN SLUSHED AT UNKNOWN DATE AND TIME. THE SLUSHING COMPOUND WAS DISINTEGRATING AND FLAKING OFF. THE TANKS WERE DRAINED AND SENT TO A REPAIR FACILITY FOR REMOVAL OF THE SLUSHING COMPOUND AND RESEALED WITH STC APPROVED FFCS-100. NOTE: AIRCRAFT IS BEING USED WITH AUTO FUEL AND IS STC''D FOR AUTO FUEL USE. (X)

PIPER LYC HARTZL FLYWEIGHT BROKEN 06/12/2000
PA31350 LTIO540J2BD F624 B4183 CUP 2000092200053
(CAN) FLYWEIGHT CUP IS SPOT WELDED TO FLYWEIGHT HEAD. SPOT WELD BROKE, HEAD SPUN WITHOUT CUP AND CUT CUP CAUSING FAILURE.

PIPER PWA CLEVELAND WHEEL CRACKED 08/17/2000
PA31T PT6A28 40106 16107200 BEAD FLANGE RADI 2000092200229
(CAN) RECENT LPI NDT TESTS REVEALED WHEEL HALF CRACKING IN THE BEAD FLANGE AREA. CLEVELAND WHEELS ARE DATE MARKED AND NDT SERIALIZED. AFFECTED WHEELS WERE DATED JUNE 1994 AND JUNE 1991. WHEELS REMOVED FROM SERVICE. (X)

PIPER PWA BOLT SHEARED 06/07/2000
PA31T1 PT6A11 41789000 UPPR DNLK HK 2000092200356
(CAN) UPON MAKING A QUICK/INSPECTION OF THE MAIN GEAR DRAG BRACES AND RODS, FOUND EXCESSIVE PLAY IN THE DOWNLOCK ROD ATTHE CLEVIS BOLT. THE RT CLEVIS BOLT P/N 41789-000 WAS FOUND SHEARED; AND THE LT CLEVIS WORN ON ITS WAY TO SHEARING.

PIPER CABLE BROKEN 10/10/2000 4415
PA34200T 6270197 AFT FUSELAGE 2000101900118
STABILATOR TRIM CABLE (P/N 62701-97) BROKE AT THE ELECTRIC TRIM DRIVE WHEEL ASSEMBLY WHILE DOING STEEP TURNS IN PT FOR COMML (ME). AIRCRAFT PITCHED UP 10-20 DEGREES BUT WAS CONTROLLABLE BY SLOWING AND LOWERING FLAPS TO FIRST NOTCH FOR SLOWRETURN AND LANDING WITHOUT FURTHER PROBLEM. ABOVE PART WAS REPLACED. SUSPECT OVER-STRESS OF TRIM CABLE (P/N 62701-73) AND THAT WAS ALSO REPLACED. ALL CONTROL/TRIM FUNCTIONS RESTORED TO NORMAL. FORM 337 ISSUED 11 OCT AND MAILED TO SCOTTSDALE FSDO.

PIPER WIEBEL ROD END BROKEN 06/03/2000 4083
PA421000 758440 RT MAIN GEAR 2000101700141
RIGHT MAIN LANDING GEAR ACTUATOR ROD END BROKE IN HALF WHERE PIVOT BALL IS RETAINED. NOT SURE WHETHER IT BROKE ON UP OR DOWN CYCLE. AFTER FAILURE, GEAR WOULD NOT COMPLETELY LOCK. BLOW DOWN SYSTEM AND HAND PUMP WERE NOT ABLE TO WORK WITHROD END BROKEN. GEAR WAS EXTENDED, BUT SLOWLY COLLAPSED UPON LANDING. FAILURE MAY HAVE BEEN CAUSED BY MACHINING MARKSON ROD END OR BY LACK OF PROVISION FOR A DOWN-CYCLE STOP NUT ON THE ACTUATOR SHAFT. (X)

PIPER PIPER WIRE CHAFED 07/18/2000
PA44180 86749002 8 IN FROM SENDER 2000101100117
(CAN) DURING TRAINING, FLT INSTRUCTOR NOTICED LEFT ENGINE TEMP GAUGE PEGGED AT HIGH RED LINE. PREVIOUS SCANS OF INSTRUMENTS, BY BOTH STUDENT AND INSTRUCTOR HAD NOT INDICATED ANY PROBLEM. LOWER POWER SETTING TRIED BUT DID NOT DECREASE THETEMP: PILOT MADE DECISION TO SHUT DOWN ENGINE TO AVOID DAMAGE AND HEADED INBOUND TO FIELD (YQM). A/C LANDED WITHOUT FURTHER INCIDENT. ENGINE GROUND RUN SERVICEABLE, BUT DECISION MADE TO INSPECT FURTHER. WIRE FROM INBOARD OF NACELLE, TO TEMP SENDER REMOVED FOR INSP. WIRE FOUND CHAFED 8 INCHES FROM SENDER. IT RUBBING ON ENGINE MOUNT OBSTRUCTED BY TY-RAPS ATTACHING IT. WIRE REPLACED, ISOLATED AND ACFT RETURNED TO SERVICE

PIPER LYC SELECTOR SEIZED 09/01/2000
PA46350P TIO540AE2A 1790001 FUEL SELECTOR/SH 2000100400116
(AUS) FUEL SELECTOR VALVE SEIZED. INVESTIGATION FOUND WATER CONTAMINATION IN THE VALVE SPOOL CAVITY. SUSPECT WATER FROZE AND JAMMED SELECTOR. SUBMITTER STATED FUEL SYSTEM HAD BEEN DECONTAMINATED 28 HOURS EARLIER PER AD/ GEN/80 AMDT2. (X)

RAYTHN PWA RAYTHN AILERON CRACKED 06/17/2000
100BEECH PT6A28 STC100BEECH 991300003 UPR/LWR JOINTS 2000092200057
(CAN) DURING REPETITIVE AILERON STRUCTURE INSPECTION, FOUND SKIN CRACKS ALONG FORWARD/AFT UPPER AND LOWER SKIN LAP JOINTS. CRACKS (2 FOUND INITIALLY) RUN LATERALLY ALONG LAP JOINT. ON SKIN REMOVAL, FOUND CORROSION UNDER SKIN AND 5 CRACKSVERYING FROM LESS THAN 1 INCH TO 3 INCHES LONG.

RAYTHN PWA HINGE BROKEN 08/08/2000 19788
100BEECH PT6A28 1156200219 RT OTBD ON STAB 2000100300221
(CAN) DURING PRE-FLIGHT INSPECTION GROUND CREW HEARD A NOISE WHEN ELEVATOR MOVED, INVESTIGATION REVEALED RT OUTBOARD HINGE BROKEN AT INSIDE STABILIZER. AIRCRAFT GROUNDED. HINGE REPLACED.

RAYTHN BEARING LOOSE 09/14/2000 8238
200BEECH MS289135 RUDDER 2000101700096
BEARING FOUND TO HAVE EXCESSIVE RADIAL FREE PLAY. AFTER REMOVAL FROM THE AIRCRAFT, THE BEARING WAS DISASSEMBLED. FOUND THE INTERNALS WERE DRY. THE LUBRICATION WAS HARD. THIS BEARING SHOULD HAVE A LUBRICATION FITTING OR A CALENDAR REPLACEMENT INTERVAL. (X)

RAYTHN EATON SWITCH INOPERATIVE 05/26/1999
200BEECH A18MX296 L/G CONTROL 2000101700140
DURING A FLIGHT TO MGW, PILOT TRIED TO LOWER THE LANDING GEAR FOR LANDING. THE SYSTEM DID NOT RESPOND. THE PILOT DECLARED AN EMERGENCY THEN PUMPED THE GEAR DOWN MANUALLY. THE GEAR CAME DOWN AND LOCKED. THE PILOT LANDED WITHOUT FURTHER INCIDENT. MAINTENANCE FOUND THAT MICROSWITCH NR 1 IN THE LANDING GEAR CONTROL WAS BROKEN INTERNALLY. REPLACED LANDING GEAR CONTROL. OPERATED SYSTEM UP AND DOWN SEVERAL TIMES IAW BE200.2 MM. OPS CHECKED OK. (X)

RAYTHN PWA BEECH SKIN CRACKED 08/15/2000 13697
200BEECH PT6A41 LEFT WING 2000100300219
(CAN) FUSELAGE SKIN CRACK IN PRESSURE VESSEL LOCATED AT WING TO FUSELAGE FILLET MOUNTING SCREW HOLE (ANCHOR NUT) AT LEFT HAND WING LEADING EDGE (APPROX 1.25 INCHES LONG).

RAYTHN BULKHEAD CRACKED 09/08/2000
58 44002411 0024400249 FUSELAGE MAIN BU 2000101900092
(AUS) REAR TAILCONE BULKHEAD LOCATED AT BS 271.92 CRACKED THROUGH WEB IN AREA OF RIGHT LOWER CARRY THROUGH SPAR CUT-OUT. (X)
RAYTHN CONT BULKHEAD CRACKED 09/13/2000
58 IO550C 44002411 0024400249 FUSELAGE MAIN BU 2000101900093
(AUS) REAR TAILCONE BULKHEAD LOCATED AT BS 271.92 CRACKED THROUGH BULKHEAD AND WEB IN THE AREA OF THE LEFT LOWER CARRY THROUGH SPAR CUT-OUT. CRACK LENGTH APPROXIMATELY 10.41 MM (0.41 INCH). (X)
RAYTHN VENT LINE FAILED 07/12/2000 150
A100 112054E LEFT & RIGHT WIN 2000101700144 150
OPERATIONAL CHECKS AT INSPECTION INTERVALS TYPICALLY FIND THE VENT HEATS INOPERATIVE DUE TO THE ELECTRICAL CONNECTION ON THE TUBE ITSELF. USING A PROBE AND INSERTING IN THE HOLE WHERE THE HEATING COIL TERMINATES PRODUCES A SPARK AND THEN THE COIL WILL HEAT PROPERLY AFTER THE CONNECTION IS MADE. THIS DEFECT IS FOUND NEARLY EVERY INSPECTION ON TWO KING AIRS. SUBMITTER STATED A REDESIGN OF THE TERMINATION WOULD MOST LIKELY CURE THE EXISTING POOR CONNECTION. (X)
RAYTHN CONT CAP BROKEN 09/30/2000
V35B IO520BA 633233W 2000101900121
AFTER CHECKING THE ENGINE OIL QUANTITY, THE ROD-OIL-GAUGE CAP FAILED TO SECURELY LOCK IN PLACE WHEN IT WAS REINSTALLED. UPON INVESTIGATION, FOUND ONE OF THE TWO LOCKING TABS HAD BENT 90 INCHES UP INTO THE FILLER CAP''S ROD-PLATE SPRING COMPARTMENT. OVER TIME, THE TAB HAD WORN VERY THIN FROM REPEATED USE. WHILE ON THE BENCH FOR INSPECTION, THIS BENT LOCKING TAB DID BREAK OFF. THE LOCKING TAB COULD HAVE FALLEN INTO THE CRANKCASE. SUBMITTER RECOMMENDED CLOSE VISUAL INSPECTION OF THIS ROD-OIL-GAUGE CAP ASSY EACH TIME THE ENGINE OIL QUANTITY IS CHECKED. IMPROVED ROD-OIL-GAUGE, TCM P/N
SKRSKY GE BLADE CRACKED 08/16/2000 18854
S61N CT581401 S611730101045 TAIL ROTOR 2000101700042
(CAN) THE T/R SPINDLE INSPECTION WAS BEING C/O AT WHICH TIME A CRACK IN THE SKIN OF THE TAIL ROTOR BLADE WAS DISCOVERED. THE BLADE WAS REMOVED FROM SERVICE AND IMMEDIATELY SENT BACK TO THE MANUFACTURER FOR REPAIR EVALUATION. (X)
SKRSKY GE SKRSKY GEARBOX CRACKED 08/18/2000
S61N CT581401 S61352060004 S613520670 M/R TRANS 2000101900136 97
(CAN) OIL LEAK WAS DETECTED ON RIGHT HAND FORWARD SIDE OF MAIN GEARBOX. AFTER FURTHER INVESTIGATION, FOUND THERE WAS ACRACK IN THE LOWER HOUSING ASSY. THE CRACK WAS 2.75 INCHES LONG AND LOCATED APPROXIMATELY 4 INCHES ABOVE AND FORWARD OF THE FORE AND AFT SERVO BRACKET. THE AIRCRAFT WAS THEN GROUNDED AND THE GEARBOX ASSY WAS REMOVED AND SENT FOR REPAIR.(X)
SKRSKY ALLSN ALLSN COMBUSTION CRACKED 06/01/2000
S76A 250C30S 23030910 SHOULDER 2000092900535
(CAN) MAINTENANCE WAS BEING PERFORMED ON THE ENGINE TO REPLACE THE COMBUSTION LINER. WHILE THE ENGINEER WAS REMOVING THE COMBUSTION CASE TO ACCESS THE LINER HE FELT A CRACK. VISUAL INSPECTION REVEALED A CRACK AT THE SEAM WELD ON THE SHOULDER OF THE CASE. (X)
SNIAS TMECA SNIAS ATTACH CRACKED 04/04/2000 96010
AS350B ARRIEL1B FUSELAGE 2000092900485
(CAN) CRACK FOUND ON THE FUSELAGE TO TAILBOOM ATTACHMENT FLANGE. CRACK LOCATED (LOOKING FORWARD) AT 2:30 POSITION ON RIGHT SIDE. CRACK LENGTH WAS APROXIMATELY 3.5 CM LONG AND ABOUT 2 MM FROM EDGE. THE TORQUE ON FUS/ TAILBOOM ATTACH BOLTSWERE UNKNOWN AT THE TIME OF TAILBOOM REMOVAL
SNIAS TMECA TMECA VENT LINE BROKEN 03/14/2000 3084
AS350B1 ARRIEL1D ARRIEL1D 0301037180 REAR BRG VENTL 2000092900777
(CAN) ENGINE REAR BEARING VENT LINE SNAPPED OFF DURING FLIGHT AND WAS LATER DISCOVERED THAT THE VENT LINE WENT INTO THETAIL ROTOR. THE PREVIOUS DAY THE VENT LINE CLAMP HAD BROKE AND IT WAS THEN NOTED THAT THE VENT LINE HAD CHAFE WEAR MARKS CAUSED BY THIS CLAMP.
SNIAS AEROSP COUPLING WORN 08/29/2000
AS350B2 350A35013004 S40 SPLINES 2000092900045
(CAN) THE PILOT WAS IN CRUISE WHEN HE LOST HYDRAULIC BOOST. THE PILOT INITIATED A HYDRAULIC FAILURE PROCEDURE AND LANDED THE HELICOPTER WITHOUT AN ACCIDENT. AN ENGINEER FOUND WORN OUT SPLINES ON THE COUPLING SLEEVE OF THE HYDRAULIC PUMP PULLEY ASSEMBLY. AS A PRECAUTION, REPLACED THE HYDRAULIC PUMP. THE INSPECTION PERIOD AND REGREASE BY EUROCOPTER IS EVERY 500 HOURS. OUR MAINTENANCE SCHEDULE IS EVERY 100 HOURS. THE RECOMMENDED GREASE BY EUROCOPTER IS G355 (ROYCO 49B) GREASE. (X)
SNIAS TMECA ZENITH PUMP READS LOW 05/21/2000
AS350BA ARRIEL1B P94B12208 ENGINE 2000092900823 32000
(CAN) PRIOR TO STARTING AIRCRAFT ENGINE, THE FUEL PRESSURE GAUGE WAS OBSERVED TO BE INDICATING ZERO PRESSURE WITH PUMP SWITCHED ON. WHEN LISTENED TO, THE PUMP SEEMED TO BE WORKING, BUT OBVIOUSLY THE ELECTRIC MOTOR WAS NOT ROTATING THE IMPELLER, AS PROVEN BY DISCONNECTING AN INLINE FUEL LINE AND OBTAINING NO FUEL FLOW. TSO ON THE PUMP HAS ONLY 32.1 HOURS, THUS EITHER A POOR OVERHAUL OR A FAULTY INTERNAL PART IS SUSPECT. THE PUMP WAS REPLACED WITH A NEWLY OVERHAULED UNIT ANDTHE AIRCRAFT WAS
TRNSQP TRNSQP BRACKET CRACKED 07/05/2000 70000
KR03A NS03089301 HORIZ STAB 2000100300267
(CAN) WHILE INSPECTING VERTICAL STABILIZER LEADING EDGE IMPACT ON SKIN, A CRACK WAS IDENTIFIED ON THE LEFT HAND HORIZONTAL STABILIZER ATTACH BRACKET. NDT BY EDDY CURRENT METHOD CONFIRMED A .0625 INCH CRACK EMANATING FROM A WELD TERMINATION OF A DOUBLER ON BRACKET. NEW BRACKETS INSTALLED ON BOTH LEFT AND RIGHT SIDES AS NEW BRACKETS MADE FROM THICKER, NON-WELDED MATERIAL.
UROCOP DOOR SEPARATED 06/08/2000 862
EC120B C533C SLIDEUPPER HINGE 2000100300054
DURING PHOTO FLIGHT MISSION, SLIDING DOOR, STD EQUIP (STOWED IN THE AFT LOCKED POSITION BEFORE TAKEOFF), AIRSPEED AT ORBELOW FLIGHT MANUAL LIMITATIONS FOR SLIDING DOOR OPEN, EXITED ACFT. THE AIRSTREAM PULLED THE SLIDING DOOR FROM LOWER LT CORNER AWAY FROM THE SLIDING DOOR RAIL, BENDING UPPER LT HINGE POINT ROLLER OUT OF THE RAIL, HINGING AFT UPPER AND LOWER HINGE POINTS, SWINGING BACK TO CONTACT THE AIRFRAME STRUCT IMMEDIATELY BEHIND SLIDING DOOR ASSY, FINALLY BREAKING THEUPPER AND LOWER SLIDING ASSYS AWAY FROM FRAME RAILS. SUBMITTER RECOMMENDED TO PREVENT RECURRENCE, CLOSE UP TOLERANCE ON FRAME RAILS AGAINST SLIDING DOOR ROLLERS, AND ENHANCE STOPS AT ENDS OF EACH FR RAIL.

OMB No. 2120-0003

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

MALFUNCTION OR DEFECT REPORT

OPER. Control No.	
ATA Code	
1. **A/C Reg. No.**	**N-**

Enter pertinent data	**MANUFACTURER**	**MODEL/SERIES**	**SERIAL NUMBER**
2. **AIRCRAFT**			
3. **POWERPLANT**			
4. **PROPELLER**			

5. SPECIFIC PART *(of component)* CAUSING TROUBLE

Part Name	MFG. Model or Part No.	Serial No.	Part/Defect Location.

6. APPLIANCE/COMPONENT *(Assembly that includes part)*

Comp/Appl Name	Manufacturer	Model or Part No.	Serial Number

Part TT	Part TSO	Part Condition	7. Date Sub.

8. Comments *(Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.)*

Optional Information:

Check a box below, if this report is related to an aircraft

☐ Accident; Date _____ ☐ Incident; Date _____

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SUBMITTED BY:

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